

AUSTRALIAN BUSHCRAFT MAGAZINE



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The First Quarterly Issue,
October 2015
FREE EDITION

AUSTRALIA'S ORIGINAL BUSHCRAFT MAGAZINE, PUBLISHED QUARTERLY

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**RICHARD H. GRAVES, THE FATHER OF
MODERN AUSTRALIAN BUSHCRAFT**

**FEATURE ARTICLE –
BUSHCRAFT & CONSERVATION**

**THE HOOTCHIE –
THE ORIGINAL LIGHTWEIGHT AUSSIE
TARP TENT**

**FIRE BY PERCUSSION –
THE TRADITIONAL FLINT & STEEL**



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RECENT ACTIVITY

 **Craig Brown**
October 13 at 1:36pm · Edited

Old Reg was lucky. By rights he should have died.
<http://www.abc.net.au/.../hunter-reg-foggerdy-missing.../6849410>
I won't comment on his lack of preparation, or ask why people would say he had "amazing survival skills", but one thing I take away from this story is

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Pages from the W. Jno. Baker cutlery catalogue, 1924.

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EDITORIAL

G'day and welcome to the first quarterly issue of Australian Bushcraft Magazine!

Back in July of 2014 we released the "Launch" issue of the magazine. In reality, this was merely a prototype which would help to mould the format, style and content of the magazine while serving a dual purpose of measuring the levels of interest and engagement by you, our readers. That first issue was a bit limited in scope, being only about 60 pages long and I'm the first to admit that it was quite an unprofessional looking publication. We had no subscription sales system in place and a decent website didn't come along until quite late in the piece (it's www.ausbushcraftmag.com.au if you want to check it out).

What the magazine did have going for it was a readership hungry for Australian-specific bushcraft info. Despite not releasing a new issue of the magazine for over 12 months, our social media sites like Facebook and Instagram remain very active and highly popular not only with our Australian readers, but with folks from all over the world. Sales of the print-on-demand hard copy of the Launch Issue continue to tick along despite the poor AUD/USD exchange rate and high postage costs at time of writing and I have received some awesomely generous and humbling praise and great some feedback on that issue. Incidentally, if you want to check out a copy of the Launch Issue, join our Facebook Group here - www.facebook.com/groups/ausbushcraftmaggroup - you can download it for free from the "files" section of the group.

Having "professionalised" a bit we're ready to kick off our regular quarterly issues of the magazine. In this issue you'll find a whole lot of interesting stuff and despite the new format, there's always a free online PDF copy of every issue of the magazine available for download from Facebook, Scribd, the Internet Archive, or Issuu. You can now purchase a yearly subscription for the magazine in hard copy and being printed in Australia, if you can't find us at your local newsagent, buying a print copy online through our website or even through Amazon won't break the bank. The commercial print-replica PDF and ebook editions of the mag are ready to go for those who prefer to read us on a screen.

I'd like to personally thank all of those who have supported us while this improved incarnation of the mag has been percolating away. You're the reason the magazine exists at all.

Cheers!



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FREE EDITION

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ACKNOWLEDGEMENT OF COUNTRY

We would like to acknowledge the Bundjalung people as the Traditional Custodians of the land upon which this magazine is laid out and published. We would also like to pay respect to the Elders both past and present of the Bundjalung Nation and extend that respect to other Indigenous Australians who may read our work.

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by C.A. Brown

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WARNING

Activities described in this magazine are potentially dangerous. Attempting them may result in loss, serious injury or death.

The information in this magazine is presented to the reader with no warranty on accuracy or completeness.

It is possible there may be significant omissions and errors in information presented. Readers embarking on bushcraft or remote area survival training activities should undertake their own research or complete formal training in the subjects presented rather than relying fully on the information presented in this magazine.

The publisher, editor, contributors or any other entity or person will not be held responsible for any loss, injury, claim or liability of any kind resulting from people using information in this magazine.

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FIRE BY PERCUSSION- THE TRADITIONAL FLINT & STEEL

CRAIG BROWN

Proper struck matches have only been around since the 1830s, and even after they became widely available in the capital cities and larger towns of the Australian Colonies, availability in the more remote areas was often mixed. Flint and steel continued to be used by folks in the bush for a couple of generations, if only as a backup for when the matches ran out or became damp.

Of course, today the traditional flint and steel is rarely seen in use. It has been almost completely displaced by the ferrocerium rod, a man-made alloy developed in the 20th Century for use with cigarette lighters, popularised by TV survival show hosts, and often known as a "flint" or a "fire-steel".

A proper, traditional flint and steel outfit, commonly called a "tinder box", was a metal tin typically containing the following items:

- A carbon steel striker.
- A piece of flint, typically an old gun flint.
- Tinder, usually in the form of charred linen rags, or charred punk-wood.
- A couple of non-striking sulphur matches.
- A candle stub.

The accepted method of making fire was to hold the steel in one hand, and strike it with a piece of flint with the other. Sparks would fall onto the charred cloth tinder in the open tin, which would then develop into an ember. The sulphur-coated head of a non-striking sulphur match was placed against the ember and fanned until it burst into flame. The tinder box was quickly closed to save the tinder, and the sputtering, dripping, flaming sulphur match was used to light the candle stub which was then used to ignite kindling and get the campfire going.

Sounds complex, and when compared to simply lighting a match or even using one of today's ferro rod fire lighters, it was complex. If you've mastered any of the forms of fire by friction, then you can usually dispense with the sulphur matches and candle stubs and simply fan the ember into a flame using your own preferred tinder, kindling and method.

The beauty of the traditional flint and steel as a fire lighting system is that it is sustainable. Lose the steel? Easy fix - just use the back of your carbon steel knife. No gun flints? Use a smashed piece of quartz. No charred cotton tinder? Char up some punk-wood or stringybark. No sulphur match? Use bullswool.

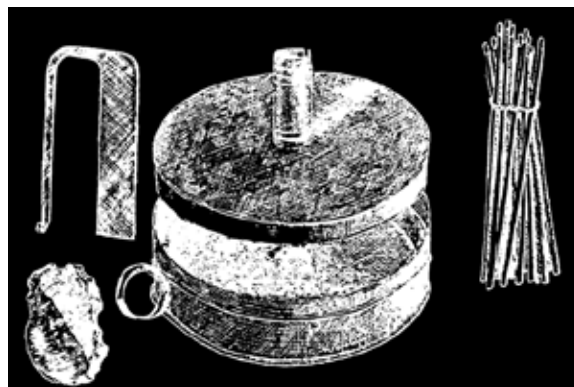
Efficient, and with easily-improvised materials, it's no wonder the traditional flint and steel kit was popular with bushmen and explorers for so long.

Like any primitive method of fire lighting, the traditional flint and steel does take some practice to master, but it's worth the time and effort. Not only is it a legitimate traditional bushcraft and bush survival skill, it's also a direct link to those who came before us. Did I mention it's fun?

TWO STEP-BY-STEP METHODS OF ACHIEVING FIRE BY PERCUSSION USING THE FLINT & STEEL

METHOD 1

A traditional method.



Tinder Box with striker, flint, tinder & sulphur matches.

Used from at least the time of the Vikings until the advent of struck matches, this method is the most simple and reliable. It relies upon a light shower of sparks falling down onto charred tinder and creating an ember which is then coaxed into a flame.

This particular method uses a tin tinder box and uses bullswool in place of sulphur matches since stringybark and its equivalents are commonly found in the Australian bush whereas sulphur matches are not.

Step 1

Gather your bullswool, kindling and wood and lay your fire, ready for lighting. Bullswool is teased out and fluffed stringybark, dry grass or any other dry fibrous vegetable matter - the finer the better.

Step 2

Open the tinder box and remove everything but a good-sized piece of the charred tinder. You should now have ready your steel striker, flint and bullswool.



Tinder Box with steel "C" striker, gun flint, charred cloth tinder & stringybark bullswool.

Step 3

Away from the tinder box, hold the striker in one hand and with the other, strike the steel with an edge of the flint in a downwards motion. Pretend you are shaving off slivers of steel with the flint - and indeed you are. The sparks are finely-shaved pieces of steel. Experiment with angles and different amounts of pressure until you are able to produce sparks every time you try.

Step 4

Now that you have the rhythm of striking the steel down-pat, it's time to do it for real. With the tinder box open in front of you and a good-sized piece of charred tinder inside, strike the steel with the flint and try to direct a spark onto the tinder. You'll know when you've



Strike the steel striker with the flint, directing the spark onto the charred tinder. You can just see the spark hitting the charred cloth tinder in this photograph.

succeeded because the area of tinder the spark falls upon will immediately start to glow into an ember.

Step 5

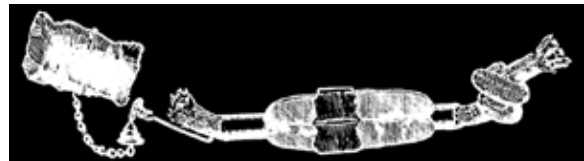
Place your bullswool in the tinder box, directly on the smouldering tinder. Blow gently and fan it until it bursts into flame.

Step 6

Tip the burning contents of the tinder box into the campfire place, add more bullswool and then build up the campfire as normal.

METHOD 2

The "modern bushcraft" method.



19th Century French peasant's pocket-sized pipe-lighting outfit consisting of a piece of flint, slow match, a slow match tube, and a striker. Some of the more elaborate versions housed the complete kit in a brass, copper or japanned steel tube with end caps.

I'm calling this one a "modern bushcraft method" because it's the one you'll most likely see demonstrated on the internet. It's actually a derivation of a 19th Century method used with a pocket-sized pipe-lighting



Tinder Box with striker from a broken file, a piece of quartz, charred cloth tinder and slow match and tube.

kit rather than a traditional bushman's fire-lighting setup. Despite its origins, it can be made to work easily enough to light a fire.

There is evidence that members of Australian exploration parties in the mid-1800s carried the French pipe-lighting kits for lighting their pipes so that's close enough for us.

At its heart, the method uses a piece of flint, a steel striker, and either charred cloth or, as seen in diagram above, a slow match and tube. The biggest difference between this method and the traditional method described earlier is that the charred tinder is placed directly atop the flint and the flint is struck with the steel rather than

vice versa. This makes the spark fly upwards, rather than down.

This method is useful for beginners on their first foray into the world of primitive fire-making.

Step 1

Gather bullswool, kindling and wood and lay your fire, ready for lighting. Bullswool is teased and fluffed stringybark,



Nicely illustrated here with a slowmatch and tube, hitting the flint (a piece of quartz here) with the striker results in sparks flying upwards rather than downwards - in this case, directly into the charred end of the slow match which immediately developed a strong ember.

TRADITIONAL INDIGENOUS AUSTRALIAN METHODS OF MAKING FIRE BY PERCUSSION?

When we think of traditional Indigenous Australian methods of making fire we tend to automatically think of the hand drill or fire saw. Fire by percussion is not something most people would even consider as a traditional Australian Aboriginal skill, but it certainly was - in certain parts of the country.

In areas of South Australia and Western Australia - the Everard Ranges, Northern and Southern Flinders Ranges, Lake Eyre, Encounter Bay and the Great Victoria Desert - Aboriginal Australians traditionally started their fires using sparks struck from stones.

Two separate methods were used. The first involved a stone adze being struck against another stone - presumably the adze was vein quartz, Australian flint or chert and the other stone ironstone or iron pyrites. The second method involved a piece of Australian

flint resting on a pad of finely shredded bark or dried grass, fur or emu feathers, held in one hand and struck glancing blows with a piece of ironstone until the sparks ignited the tinder.

Both methods were observed by anthropologists in the early part of the 20th Century, but it is unlikely the methods were learned from European settlers since the use of "fire stones" appears in Dreamtime stories.

There is also circumstantial evidence to indicate that Tasmanian Aborigines also used fire by percussion. Since the Tasmanian Aborigines were cut off from the mainland around 10,000 years ago at the end of the last ice age, it is possible that fire by percussion was practised in Tasmania for at least 10,000 years, and therefore by default, for much longer on the mainland.

dry grass or any other dry fibrous vegetable matter - the finer the better.

Step 2

Time to practice your "flint swing". Hold the flint in one hand and with the other, strike the edge of the flint with the steel striker. Experiment with angles and different amounts of pressure until you are able to produce sparks every time you try. It can take some practice to generate decent sparks using this method, and the best piece of advice I can give is to make sure you swing the steel from a bent wrist rather than from the elbow.

Step 3

If using charred cloth tinder, pick out a piece approximately 1cm x 1cm and place it on top of a sharp edge of your flint, holding it in place with your thumb. In your other hand, hold your steel striker firmly between thumb and forefinger and strike the edge of the flint. Sparks should fly in an upward direction and set the charred cloth tinder smouldering.

Step 4

Once the charred cloth begins to smoulder, quickly,



Place the smouldering tinder in the middle of your bundle of bullswool (in this case, teased-out dry grass) and blow. Soon it will burst into flame.

but carefully pick up a handful of bullswool and deposit the smouldering piece of charred cloth right in the middle of it. Wave the whole bundle gently from side to side, fan it with your hat or simply blow on it.

Step 5

Soon the bundle of bullswool will catch flame, so transfer it to your campfire place, add more bullswool and then build up the campfire as normal.

IMPROVISED MATERIALS FOR FIRE BY PERCUSSION:

Flint - Piece of quartz or chert with a sharp edge. If it sparks on steel you can use it.

Steel - Back of a carbon steel knife, piece of a broken file, iron pyrites or ironstone

Tinder - Charred cotton or linen from a handkerchief, tail of a shirt, patch pocket, etc. Charred stringybark or punkwood. Inner "felt" from certain species of bracket fungus.

Kindling - Fluffed stringybark, dead grass tree fronds, dead bracken, teased out dry grass, bulrush fluff.

IN THE OLD STYLE...

BUSHWALKING IN THE OLD STYLE- A-FRAME PACKS

CRAIG BROWN

In Australia the bushwalking swag remained in use until at least the 1920s, and far longer in Queensland. It was finally displaced by the rucksack, and the most popular of these for many years was the A-Frame pack.

The A-Frame pack had a triangular steel or cane frame with shoulder straps attached at the triangle's apex to the bottom corners and to this frame was buckled a shallow canvas bag. Suspension harness systems on the old A-frame packs were rudimentary at best. They consisted of a leather lumbar pad and two narrow leather shoulder straps. Many of the A-Frame rucksack types available in Australia included a narrow leather waist belt which, unlike today's hip-loading, heavily padded waistbelts, served only to keep the rucksack stable during off-track walks or cross country skiing trips. The leather harness and shoulder straps were typically quite tough, but would dig into the wearer's shoulders when carrying heavy loads. Accordingly, some manufacturers added removable padded wool, felt or canvas-covered foam shoulder pads to their shoulder straps.

A pair of bushwalkers in central western Tasmania in the 1920s looking longingly towards Frenchman's Cap. They are carrying frameless and "A" Frame packs respectively.

SLV H37687/34



A perfect example of a 1940s-era Australian-made A-Frame pack. This one was manufactured by AR Broad in Melbourne and was based closely on the original Bergans of Norway rucksacks. This one has a short frame, making it well-suited to ski adventures. Pack is from the Australian Bushcraft Magazine Equipment Collection.

Typically the main sack of an A-frame pack was made from heavy duty canvas. Pocket closures and frame attachment points were heavy duty leather with strong steel or brass buckles. Where necessary, harness leather patches were often used to stop the constant rubbing of the frame from damaging the canvas. Then, as now, most packs were not waterproof, but were treated to be shower proof. Anything which needed to be completely waterproof inside the pack was carried in a waterproof oilskin or plastic bag, or screw-top plastic or aluminium jars.

Pack layouts and configurations tended to vary according to model and manufacturer. Packs for serious off-track bushwalkers generally deleted the side pockets as these can become hung up on vegetation in close country. Most manufacturers, simply used time-honoured layouts from successful overseas mountaineering packs such as those made by Bergans of Norway and Lafuma in France.

The most common layout was the 3-pocket "Bergan" layout. This was a large main sack with a zippered compartment under the lid flap, two tall side pockets and a wide rear pocket. The external

pockets were useful for carrying rain gear, lunch, first aid outfits or anything else which was desirable to keep close to hand. External pockets meant the bushwalker could avoid unpacking their pack simply to get at their rain cape or their lunch.

Packs commonly used in Australia from the 1920s to the late 60s included;

"PADDYMADE" PACKS.

Paddymade was a brand name used by Paddy Pallin to indicate equipment made in Paddy's own factory on Market Street in Sydney. From the early 1930s to the late 1980s Paddy Pallin made basic, but serviceable bushwalking equipment for the Australian market - everything from packs and tents to sleeping bags and boots.

As far as A-frame packs go, Paddymade was built on them. Models included the "Bushman", the "Bushwalker" and the "Federation".



Product label, grey painted steel frame and grey chrome-tanned leather suspension which made Paddymade A-frame rucksacks instantly recognisable.

Pack is from the Australian Bushcraft Magazine Equipment Collection.

Initially available with either cane or steel frames, the lightweight cane frames were eventually phased out in favour of the unbreakable steel frames.

Some Paddymade A-frame pack models were released in a "deluxe" edition. Typically the deluxe features included a full leather bottom, designed to totally eliminate wear to the canvas of the bottom of the rucksack, and a zippered pocket built into the underside of the main flap.

Paddymade packs are much sought-after today by members of the Australian Bushcraft community, but there are a few issues with using vintage Paddymade packs in particular. The canvas bag and the steel frame are typically bombproof - even on my 1950s-manufactured De Luxe Federation pack, but the leather on this pack, and on younger Paddymade A-frame and H-frame rucksacks in the Australian Bushcraft Magazine Equipment Collection, has deteriorated significantly. Being chrome-tanned, the leather should last for several more decades, but it instead goes fluffy on

the edges from dry rot and breaks easily. If you are wanting to pick up an old Paddymade A-frame rucksack for actual use as a bush pack, be aware that you'll probably have to replace most of the leather, including suspension, shoulder straps, lumbar pad and pocket closures.

Despite soldiering on well into the 1970s and even the 80s in some cases, the Paddymade A-frame packs were often replaced with H-Frame packs and the trusty old A-frames sent to the tip where they'd end up as landfill.

A.R. BROAD

Later known as Broad Ski, AR Broad made, amongst other items of bushwalking and skiing equipment, A-frame packs for decades in Melbourne. Located on Elizabeth Street, AR Broad was loved by both bushwalkers and cross-country skiers.

A&R Broad packs were close copies of the various Bergans of Norway mountaineering pack designs of the 1920s and 30s. To cope with Australian conditions, they were made using military grade canvas, painted mild



Paddymade De Luxe Federation A-frame rucksack. In its day, this was a very good serious bushwalker's pack. The abrasion-proof leather bottom eliminated wear to the base of the pack, the double pack flap was designed to keep the contents of the pack dry when a wet groundsheet or japa tent was stowed under the main flap. There was a zippered pocket built into the pack flap for storing matches, change, keys, or other small items. Many of the old packs lacked such a feature. Note the placement of the external pockets on the pack - nothing on the sides to catch on vegetation during cross country, off-track walks.

Pack is from the Australian Bushcraft Magazine Equipment Collection.



Zippered accessory, "safe-keeping" compartment built into the underside of the lid of the AR Broad 3-pocket A-Frame Rucksack. Pack is from the Australian Bushcraft Magazine Equipment Collection.

steel for the frames and chrome tanned leather for the suspension and straps, in the standard bushwalker's grey finish.

Whereas Paddy made's designs were basic, and designed to be functional, cheap and cheerful, AR Broad's packs were finished to a higher standard, with excellent quality stitching, better leather components, nickel plated rivets and buckles, and very nice grey leather

binding on all pockets and the main sack.

The olive drab, three-pocket AR Broad A-Frame rucksack is one of the jewels of the Australian Bushcraft Magazine Equipment Collection.

ARMY P42 BERGAN

During WWII the British army introduced into service an A-frame



1966-dated Australian Army P42 Bergan A-frame rucksack (left) alongside a late 1960s Paddy made "Explorer" H-Frame rucksack. Packs from the Australian Bushcraft Magazine Equipment Collection

mountaineering rucksack known as a "Bergan". This is a reference to the fact that the first model of the rucksack was almost a direct copy of a Bergans of Norway mountaineering rucksack. The Pattern 42 Bergan was used heavily by British special forces and of course some made their way to Australia where they were evaluated by our own special forces, the Independent Companies/Commando Squadrons and Z Special Unit.

The P42 Bergan was manufactured in Australia for military purposes for decades, with Australian-made versions seeing service with SASR and others in Malaya, the Indonesian Confrontation and in South Vietnam. As with all items of military field gear, they found their way into army surplus auctions and then into disposals stores.

With such rugged construction and a close resemblance to the civilian bushwalking packs of the day, the P42 Bergan was eagerly snapped up by budget-minded bushwalkers, scouts and the like. Bombproof, it weighs about 500g more than the equivalent

Paddymade A-frame pack, so it was seen as somewhat clunky and a bit too heavy by the experienced bushwalking enthusiasts of the day.

Despite the reputation as a "beginner's rucksack", it's a great pack. Well-thought-out and includes many useful features which didn't appear on civilian packs of the same vintage.

You can still buy P42 Bergans since they are widely available to collectors and war reenactors.

Despite the fact that they literally drip with nostalgia, A-frame packs aren't all-singing and all-dancing. There's a definite learning curve.

I remember my first bushwalk with an A-Frame rucksack, which wasn't too many years ago. It was a simple overnighter into the Shoalhaven Gorge in the Morton National Park south of Sydney. The plan was to walk down Badgery's Spur to Badgery's Crossing Place, camp by the river that night and then walk out again the next day.

Using a newly-acquired Paddymade A-frame pack made around 60 years ago, I was enjoying a pleasant downhill stroll when suddenly one of the leather shoulder straps gave way due to dry rot. I had a bit of cord with which I tied it back



The basic equipment carried on the horrible bushwalk described. The A-Frame pack pictured is a 1950s-vintage Paddymade Deluxe Federation model.

into some semblance of togetherness and kept walking. So far, I was impressed. Sure the snapped shoulder strap was a bummer, but the field repair only took five minutes and it was as good as new and not all that uncomfortable. In fact the pack was quite comfortable to carry. The air gap formed by the frame was nice and cool and there wasn't a hint of the shoulder straps digging in to me that many of the older bushwalkers had complained about.

Once at the campsite more instances of dry rot made themselves known. I had two pocket buckles fall off due to dry rot in the leather straps.

That night as I settled in to my sleeping bag under my 1960s-vintage Paddymade japara tent, I began to dread the very steep walk out of the gorge the next day. I could only guess at what else might fail on this old pack as I humped it back up the spur.

As it was, nothing else failed on walk back up the hill. Instead, I had a taste of why the old timers almost universally dumped the A-frame packs as soon as newer-fangled types such as the H-Frame and the internal framed packs became available. Walking uphill, carrying the pack became an endurance exercise. It felt as though I was being pulled backward by the shoulders, while being kicked in the kidneys with each tortured step. The old timers didn't call these packs "kidney killers" for nothing.

As I finally, mercifully reached the car park and slung the pack into the boot of the car I reflected on what went wrong.

There were a couple of problems with the pack's design, but I reckoned I could solve the bulk of the uncomfortable ride of the pack by loading it correctly. Growing up with modern internal framed packs with their comfortable hip-loading capability had led me to pack the A-Frame Paddymade pack just like I would any modern backpack. Pretty much it meant an attempt to keep the centre of gravity of a pack as close to the back as possible. With a modern pack I tend to achieve this by keeping the heavy stuff out of any external pockets and making sure any heavy items sit around halfway up the pack. It works nicely - with a modern pack.

Unfortunately, the A-frames have a different dynamic. Since they angle outwards from the back of the wearer, putting the heavy stuff at the centre of the back serves to make the pack's frame operate a bit like a fulcrum. The shoulder straps pull backwards and the lumbar strap and sides of the bottom of the frame slam into your kidney area with every step.

To stop the pulling and the slamming is stupidly easy. You just put the heavy items right at the bottom of the pack and as the heaviest part of the load is located right against your lower back, the centre of gravity is improved and all the shoulder pulling and kidney slamming becomes a thing of the past. I wish I'd thought of it sooner.

FINDING A SERVICEABLE A-FRAME PACK TODAY

Vintage civilian items can be a bit dicey condition-wise so army surplus is a better bet. There are several army surplus A-Frame style packs available.

1. Swedish M39 Rucksack. One 40 litre canvas sack with a steel A-frame and leather harness. This is a nice traditional style pack for the bushcraft enthusiast. Can still be found cheaply and in good nick. Treat the leather with dubbin or neatsfoot oil and if the frame doesn't fit your waist it can be bent outwards. Pack doesn't have external pockets.

2. US Mountain Rucksack. Equivalent of the Pattern 42 Bergen, and was used from WWII to the 1960s. 60 litre canvas main sack with lots of features plus three external pockets and a steel A-frame. Can be bought relatively cheaply online from auction sites.

3. US Medium ALICE Pack. Sort of a hybrid A-frame/H-frame. Nylon pack cloth, comfortable padding. Cheap and availability is good.

ADVANTAGES OF A-FRAME PACKS

Once "dialled-in", an A-Frame pack begins to show its advantages:

1. No waistbelt. While this may be seen as a bit of a disadvantage to some who are used to relying upon the stability and comfort of a padded waistbelt, it does allow you to wear pouches, etc. on your bush belt. Now you can carry a canteen, and or PSK and knife right at your waist where they belong.

2. The external frame allows you to carry awkward loads without digging into your back. It is also cooler due to the resulting air gap between your back and the rucksack. In addition, the frame can be easily dismounted from the frame for carrying tools, firewood, etc. in a base camp environment.

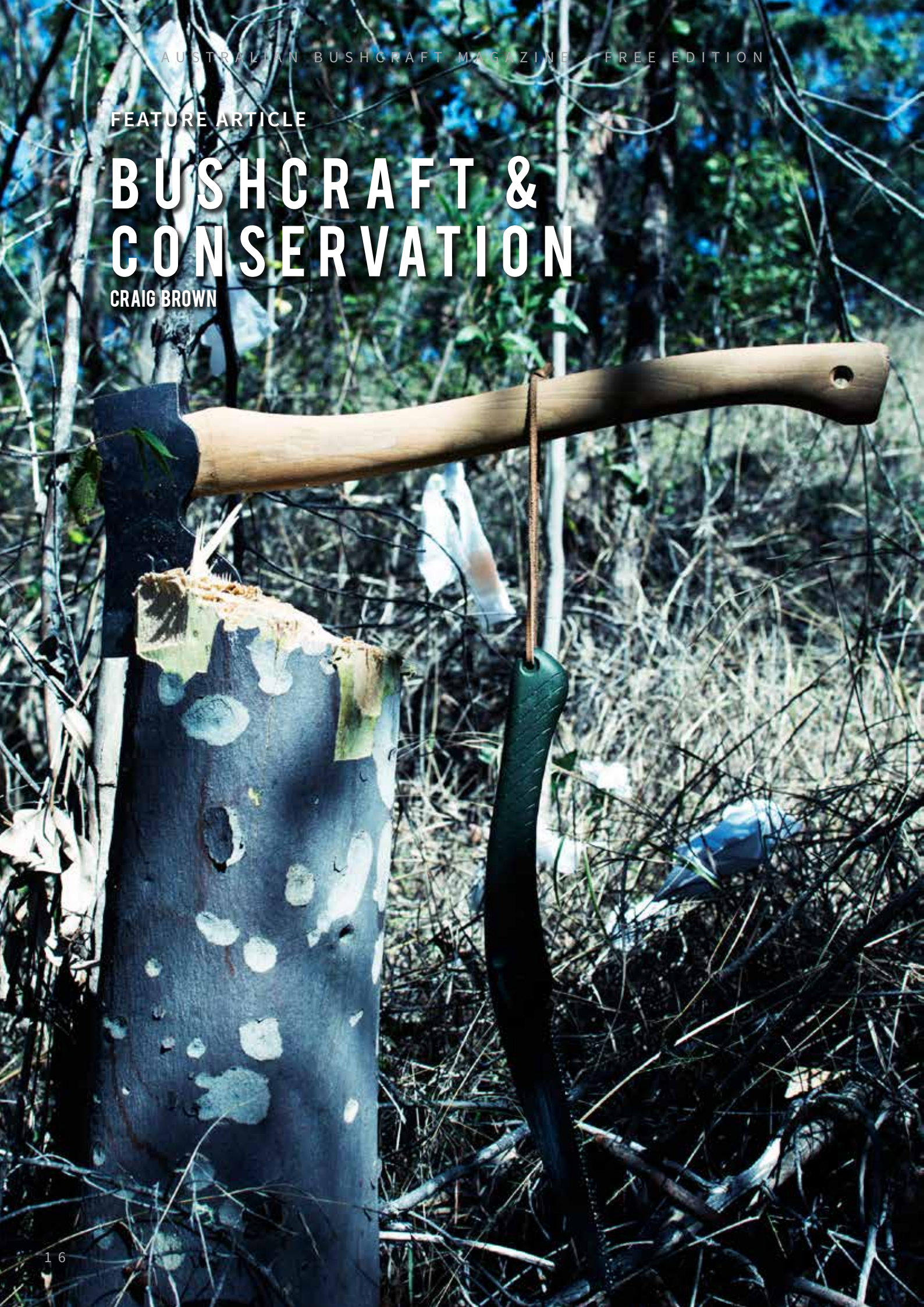
3. Lighter loads. When bushwalking, the lack of hip-loading with an A-frame pack means that most of the weight is suspended from your shoulders and presses against your lumbar region. This promotes the carrying of much lighter loads.

AUSTRALIAN BUSHCRAFT MAGAZINE FREE EDITION

FEATURE ARTICLE

BUSHCRAFT & CONSERVATION

CRAIG BROWN



THE PRACTICE OF BUSHCRAFT CONSERVES, AND DOES NOT DESTROY, WILDLIFE.

RICHARD H. GRAVES,
AUTHOR OF "THE 10 BUSHCRAFT BOOKS"

There's a place I do a fair bit of bushwalking. It's genuine wilderness - virgin bushland and rugged mountain gorges as far as the eye can see. It extends a good hundred kilometres or so to the north and the west, taking in part of the Great Dividing Range - a pretty big chunk of country.

However, it's also just close enough to the Big Smoke that from time to time you get a variety of folks spending some time out there. Bushwalking clubs, school Duke of Edinburgh Award parties, scouts and venturers, harder core solo bushwalkers and trail runners, and yes, bushcraft enthusiasts. I'm not talking about Yours Truly, rather I'm talking about the blokes who'll completely FILL a 75 litre pack with all manner of junk and then hang a buck saw and an axe off the side for good measure - all for an overnighter. Clearly novices, and that's OK. I heartily support those folks who carry too much crap. One way or another it becomes a valuable learning experience for them. What I am concerned about is the axe and the saw.

These blokes of whom I speak are not some theoretical example. Rather, these are two blokes I said "G'day" to while I was leading a group of bushwalkers on a day walk to a nearby lookout. I saw the huge packs, I saw the big BK-2 knife, the Gransfors Bruks small forest axe and the home-made bucksaw and I gave them the benefit of the doubt as members of the Australian bushcraft community, figuring they'd leave the hardware at home next time when they realised the extra weight wasn't worth lugging down into the valley and back just for a bit of wood carving or "firewood processing". To be honest, I was quite chuffed to see them out there. In my experience, you don't often see many bushcrafty folks in the really wild places. Did I mention that the area in question is a national park?

The following weekend, I went down to the same area on a two-nighter and sure enough as I walked through the most obvious campsite, a grassy flat near the river, I noticed that despite a good amount of deadfall timber around the place, there were at least seven or eight wrist-thick wattle and eucalypt saplings which had been chopped down with an axe and were laying where they'd fallen.

Another couple of felled green saplings had been "processed" - one was cut into 10-20cm pieces and another had been used to make a cantilever billy hanger, tied down with a few metres of olive drab paracord. Also laying around were two long de-barked green saplings sharpened to a fine pencil point. Were they trying to get water from them? Hot tip - cut your water saplings into 30cm lengths before trying to extract water from them. Were they some kind of spear seemingly best-suited for taking down a grizzly bear in some North American forest? I sincerely hope they weren't spears made for the purpose of spearing the most common animal in that area, the gentle wombat. Once again, note that we're talking about a national park here.

Green timber is protected in a national park. In fact, deadfall timber is too, but using some for a bit of carving is really no different to using some for camp fire wood in those areas where fires are permitted. Hunting, or attempted hunting of animals is illegal in a national park without a permit and for a very good reason. National parks are wildlife sanctuaries. I looked around for snares and traps, but thankfully didn't find any, or if they were there, they weren't set in the most profitable locations, which is a blessing I suppose.

Is it possible that the two bushcraft enthusiasts in question were not actually the ones responsible for the damage? Sure, anything is possible, but you know as well as I do that it was these same guys. I guess that even if they hadn't planned to chop up any green timber down there, they carried the shiny new axe and the saw all that way, and they figured it would have been a shame not to cut something up with them... If they'd been on private property and had the landowner's permission there wouldn't be an issue.

Lesson number 1 in bushcraft conservation - leave the axes at home if you're in a national park. If you carry it, you'll want to chop things with it and if you're like the two bushcraft enthusiasts in question and don't have the self-discipline to only use it on dead, fallen timber, you'll play lumberjack and go for the live stuff.

Why should I care if ten or so secondary regrowth saplings cop the chop? Truth is, I

don't feel their pain. I don't get all misty-eyed at the waste of their young, woody lives, so full of arboreal potential..., but no one wants to go bushwalking/mountain bike riding/4wding or camping in a place that's been hacked up by idiots. Besides, what I care about is the public perception of bushcraft enthusiasts in Australia.

When people emulate what they see on American YouTube videos and go out into a national park and break the law by vandalising the place, it reflects poorly on all of us and worst of all, it provides bulk ammunition to those who would seek to try and lock all of us out of the wild places.

Bushcraft and conservation have always gone hand-in-hand. Bushcraft practitioners should in theory have a deeper appreciation for the natural environment as they work to understand it and live with their surroundings, not work against them. Sadly, as you will see in the Profile on Richard Graves later in this issue, this has always been far from the case, and a few idiots can, and often will, ruin it for the majority.

In the introduction to his 1944 book *Bushcraft: How to Live in Jungle and Bush*, Richard Graves (writing under the pen name "Wontolla") had this to say -

Never kill unless for the pot - never chop down a green tree for a pole if there are dry poles nearby - never wantonly destroy any plant or animal - study the bush, learn to read its secrets; watch a mason fly building and go to the ant for another lesson and you'll realise that the bush is your friend.

I reckon that's a sentiment to follow.

At its most basic and selfish level, the practice of conservation means that you can enjoy those areas you frequent in as raw a natural state as possible, with pure mountain creeks, majestic ferns and rich bird and animal life. Once you start chopping down saplings, leaving faeces unburied next to that same creek, scattering rubbish around the place, or start trapping the local wildlife, you're pretty much spoiling it for everyone, including yourself.

On a wider level, conservation does what it says on the tin - it conserves. It helps allow disrupted areas to regenerate, it protects native species of flora and fauna. It supports those vast and complex inter-related native ecosystems which supply us with clean air and water and food.

There's a few basic rules of thumb to consider when you're out bush, whether on public land like a National Park or a state forest, or if you're on your own private property or

someone else's property with permission. They aren't designed to reduce your enjoyment of the bush or to marginalise you, they're all about being responsible for your own actions and helping to keep the place in good nick for yourself and others. It's also about recognising and protecting the wide variety of plants and animals which surround us out bush, not just the bush tucker or the other useful plants.

LEAVE YOUR CAMPSITES TIDY.

Call it what you will, "minimal impact on the environment", "leave no trace", or "stealth camping", leaving the place clean and tidy is the mark of the serious bushgoer.

Leaving absolutely no indications of your occupation of the site is the mark of the true bushman.

SAFEGUARD THE WATER.

Don't defecate or urinate in or near it.

Don't wash dishes or yourself in or anywhere near it with soap. Washing water soaks into the ground and will make its way down to the nearest watercourse or aquifer, taking the soap with it. Someone downstream may be drawing their drinking water from it and the local critters of course will be drinking from it as they always have done.

In summer and autumn, decent water way be hard to find. Fouling the only available water through sheer negligence or laziness is a bastard act.

PRACTICE PROPER BUSH TOILETING.

Take a walk around any bush campsite anywhere near habitation or a main road in Australia and you'll soon notice a pattern to

those strange, soggy lumps of white paper strewn around the place. They will usually form a circle around the campsite at just the right distance beyond the glow from camper's 12v lights and lanterns.

Yep, we're talking about toilet paper. It's freaking disgusting. Flies will crawl all over it for weeks until it starts to break down and those same flies will buzz into the phantom poo-er's own campsite and crawl all over their hands, face and any uncovered food or utensils. Soon the phantom poo-er and his or her mates will start to wonder why they're beginning to feel a bit crook.

When you need to go to the toilet out bush, select an area at least 100m away from any campsites and water sources. Dig a hole around 15cm deep to use as a latrine and fill it back in once you're done. A plastic Fiskars trowel weighs nothing and costs about \$3 from your local chain hardware store. There's seriously no excuses.

CARRY OUT YOUR RUBBISH.

Carry a plastic bag specifically for the purpose of carrying out your rubbish.

Leave unnecessary wrapping and bottles at home. This also helps to keep the weight of your pack down.

While paper can be burned, tins, bottles, foil, plastic bags, and such should be carried back out with you.

Glass and tins don't burn. "Burn bash and bury" just hides the problem a cm or so under the ground, and defeats the purpose since animals will often dig up buried rubbish and scatter it over the surface of the ground.

If you carry it in, then carry it out.

Extra "super bushcrafter points" for you if you pick up and carry out any rubbish left by less-enlightened, more inconsiderate visitors to the same area.

RESPECT THE LOCAL PLANTS AND ANIMALS.

Don't destroy green vegetation.

Don't hunt unless it is legal to do so, and even then, only do it ethically and humanely.

Don't kill snakes.

Feeding native wildlife around the campsite can turn them into pests, can promote a reliance upon humans for food, can lead to high population concentrations and lead to aggressive behaviour from some of the larger animals.

PRACTICE GOOD FIRECRAFT.

Firecraft isn't just about different ways to light fires, it's about the size and type of fire and what you do with the fireplace afterwards.

In most bush in Australia, an axe is unnecessary for "processing firewood". Batoning wood is just as unnecessary. Deadfall timber doesn't need to be chopped. You don't need to cut or baton kindling in most areas of Australia unless it's been raining non-stop in the area for two weeks, and if that is the case I can guarantee that 90% of the people reading this wouldn't be out there anyway. If you bring an axe, you'll want to use it - on anything. So practice self discipline.

Keep your campfire just large enough to boil water, cook your tucker and throw out a bit of heat on a cold night.

Where possible use an existing

fireplace, or if you have to make your own, make a pit fire. Dig the pit fire place out with your toilet trowel to a depth of about 5-10cm and keep the spoil in a heap nearby.

Make sure your fire is completely out before you leave by dousing it with water, scattering it, dousing it again and when you're sure every ember has been doused and it's cool to the touch, bury your fireplace and cover it back over with soil, then with leaf litter, etc.

If you're going to an area which is sensitive or an area with very little fuel for campfires, then do your cooking on a gas, shellite or metho stove instead of a campfire.

On days with a total fire ban, don't light a fire at all... ever.

PRACTICE GOOD CAMPCRAFT.

Never cut live trees for hootchie or tarp poles or for improvised shelters, or billy hangers, or camp furniture.

Avoid cutting live vegetation when making a bushman's bed. Instead, carry a single quilt cover or army air mattress cover and stuff it with leaf litter.

Don't establish a new campsite if there's an existing one nearby.

It's not rocket science, but these few principles will go a long way to conserving whatever chunk of bushland, rainforest or desert country you may be occupying for however long, while imbuing a sense of personal responsibility for conserving that chunk of bushland, rainforest or desert, and ensuring that the bushcraft community's reputation as a whole remains as untarnished as possible by the actions of those few idiots who simply don't care and never will.

It's just common sense and it won't reduce your enjoyment of the bush, so why not try to set the example?

THE 7 PRINCIPLES OF "LEAVE NO TRACE"

Leave No Trace is a worldwide movement which promotes a set of ethics promoting basic conservation by outdoorsmen and women.

See www.Int.org.au for more info.

1. Plan Ahead and Prepare

Poorly prepared people, when presented with unexpected situations, often resort to high-impact solutions that degrade the outdoors or put themselves at risk. Proper planning leads to less impact.

2. Travel and Camp on Durable Surfaces

Damage occurs when surface vegetation or communities of organisms are trampled beyond repair. The resulting barren area leads to unusable trails, campsites and soil erosion.

3. Dispose of Waste Properly

Rubbish and litter are primarily social impacts which can greatly detract from the naturalness of an area.

4. Leave What You Find

Minimise site alterations, such as digging tent trenches, hammering nails into trees, permanently clearing an area of rocks or twigs, and removing items.

5. Minimise Campfire Impacts

Because the naturalness of many areas has been degraded by overuse of campfires, Leave No Trace teaches to seek alternatives to fires or use low-impact fires.

6. Respect Wildlife

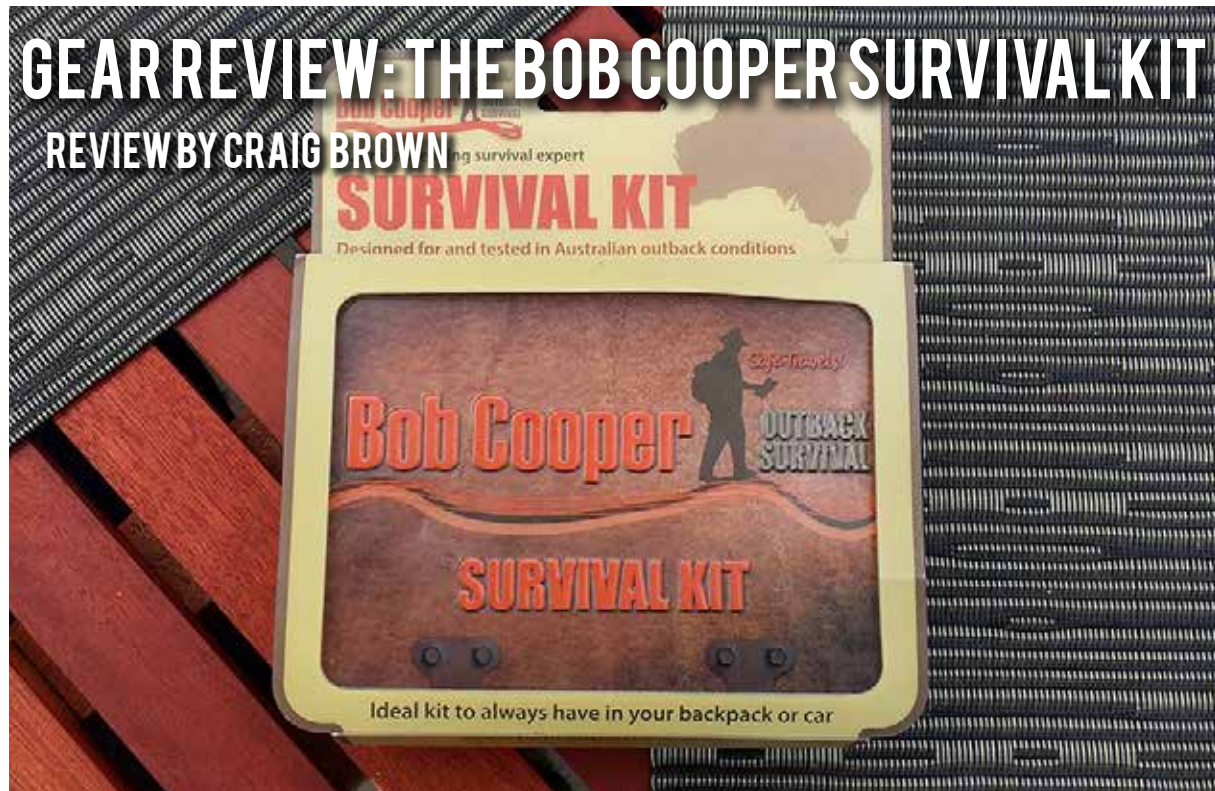
Minimizing impact on wildlife and ecosystems.

7. Be Considerate of your Hosts and Other Visitors

Following hiking etiquette and maintaining quiet allows visitors to go through the wilderness with minimal impact on other users.

GEAR REVIEWS

This issue we review the Bob Cooper Survival Kit, the “Timor” canteen cover and the Terra Rosa Gear Japara Tarp.



Product description from Bob Cooper Outback Survival:

“The Survival Kit contains all the necessary items for survival in the wilderness.

Designed and tested in the outback, the kit’s quality components have been selected specifically to be the most versatile and effective system of survival. Bob Cooper has identified the ‘Big 5’ priorities of survival to be water, warmth, shelter, signals and food. Using this practical kit, in conjunction with the included instruction and survival tip sheet, you can survive in the Australian outback until you walk out or assistance arrives.

Packed in a compact tin small enough to fit into a large pocket and weighing only 434 grams, it is durable and lightweight. Already used by the Australian Defence Force, pilots, government agencies, and mining companies, this kit is ideal to take with you while camping, hiking and fishing, as well as for keeping in your vehicle while you are on the road.”

“Survival situations cannot be planned and they are not wished for, but they should be expected and prepared for. That is why I design, carry and believe in survival kits.” ...so says WA-based bush and desert survival expert and instructor Bob Cooper. As mentioned in the Launch Issue in our review of his book “Outback Survival”, Bob Cooper promotes a “survival

kit” approach to preparation for unexpected emergencies when travelling or working in remote areas. As it happens, so do I. I’ve been carrying and using a personal survival kit out bush for years, so I was very interested to see the latest version of Bob Cooper’s kit.

A Personal Survival Kit (PSK), is not much

use to you unless you are actually carrying it when disaster strikes, so it needs to be relatively lightweight, rugged and close to hand at all times. For foot-borne bushgoing that means on your belt or in a day pack or haversack, and if you're travelling by vehicle, water craft or by private aircraft that means in the glovebox, or in your emergency grab bag. Well-designed, thought-out, thoroughly tested and reasonably-priced to boot, the Bob Cooper Survival Kit ticks all the boxes.

Weighing in at just under 440 grams, the kit contains the following components:

- use to you unless you are actually carrying it when disaster strikes, so it needs to be relatively lightweight, rugged and close to hand at all times. For foot-borne bushgoing that means on your belt or in a day pack or haversack, and if you're travelling by vehicle, water craft or by private aircraft that means in the glovebox, or in your emergency grab bag. Well-designed, thought-out, thoroughly tested and reasonably priced to boot, the Bob Cooper Survival Kit ticks all the boxes.
- Weighing in at just under 440 grams, the kit contains the following components:
- *Container.* A hinged tin, deep enough to boil 400ml of water at a time and also capable of being used as a digging tool in soft-packed earth or sand. A foam sheet inside the lid helps stop rattling, and is useful tinder for firelighting in bad weather.
 - *Liner-locking knife.* Nice size, and relatively sharp out of the tin, but needs to be opened forcefully and positively every time to ensure the liner locks the blade into position.
 - *Multitool.* Crucial for working with the trace wire in the kit, and works as a pot grabber when boiling water in the tin. All other functions work great, apart from the knife blade, which will need to be sharpened before use.
 - *Tweezers.* A good, basic pair of tweezers.
 - *Liquid-filled button compass.* Graduated sufficiently to allow relatively precise "survival navigation". Despite being stored in a ferrous tin, the compass points north accurately when tested against my dead-accurate prismatic marching compass. There were no bubbles in the compass, the downfall of most of the liquid-filled button compasses available these days. Finally, the compass body has a groove for tying a lanyard, which is crucial for real-world use. Tie on a lanyard to prevent loss of the compass.
 - *LED torch.* Takes 1 x commonly-available AAA battery, which will last for several nights of use. The water-resistant torch can be used for signalling and the battery may also be used for starting fire in conjunction with the trace wire if you can notch and kink it with the multitool.
 - *Whistle.* SOLAS-approved, pea-less PFD/Life jacket distress whistle with lanyard hole and strap clip. Very loud and will work when wet.
 - *Acrylic mirror.* Does not include an aiming device or sighting grid like a



*The Bob Cooper Survival Kit with components all laid out.
Stock image from www.bobcoopersurvival.com.*

military heliograph or signal mirror, but it doesn't need to if you know and use the "V-finger" aiming method. It will not de-laminate in hot/humid environments like most of the acrylic, laminated grid-sighting mirrors such as the StarFlash or the RescueFlash. Unlike heavy glass military signal mirrors, it will not crack or shatter if dropped on a hard surface. The KISS principle in action.

- *2 x clear plastic transpiration bags.* These may be used for procuring water via the transpiration method, as sheets for a solar still, or used to catch and condense steam with an improvised water distillation setup. They are also useful as shelter sheets when opened out, and two can be used as an improvised "survival bag". Of course, they are perfect for water catchment and storage.
- *Ferro rod.* This is a BCB-style "Ranger" pattern firelighter which is bundled with a section of hacksaw blade as a striker and a cord lanyard. For best results, touch-up the slanted edge of the hacksaw blade striker before first use to sharpen it up a little, and be sure to use it to scrape most of the blacking off the surface of the ferro rod to ensure more reliable sparking when you need it.
- *Magnifying Lens.* A credit-card sized Fresnel lens with a vinyl protective cover. Use as a firestarter with direct sunlight, or can be used to search for splinters, etc.
- *Fishing Kit.* 6 x assorted fishing hooks, a swivel, a couple of sinkers and monofilament line. May also be used for clothing or equipment repair.
- *Trace wire.* Light, but strong stainless steel wire. Can be used as fishing trace wire, as general purpose tie-wire, and for snares.
- *Stock cubes.* Beef and chicken stock cubes. May be used as a soup, to flavour otherwise unpalatable bush foods, as berley, bait or as a lure for certain land animals. The foil wrappers may be used for fishing lures.
- *Cord.* Multi-purpose green 2mm nylon cord. Useful for shelter-building and equipment repair.
- *Tea bag.* For morale and as a good excuse to stop and think about your next course of action in a survival situation. As noted in the kit's instruction sheet, tea is a diuretic.
- *Coffee sachet.* For morale as per tea. As noted in the kit's instruction sheet, coffee is a diuretic.
- *Glucose tablet.* Instant energy boost, and part may be used as a sweetener for coffee or tea. When crushed and mixed with condys crystals (not included in the kit) can make fire.
- *4 x Aquatabs.* Water purification tablets. Half a tablet will purify one tin full of water. A full tablet crushed and mixed with about a tablespoon of water can be used as an antiseptic solution in a dire emergency.
- *Basic medical kit.* Bandaid-style adhesive dressings for covering small cuts or grazes to stop them becoming infected. Alcohol prep pads for cleaning around wounds and as emergency fire lighters. Antiseptic wipes for cleaning around wounds. Scalpel blade for use as a splinter probe and also for general use for skinning and cleaning fish or game. Cotton pads for wound cleaning. May also be used for firelighting and as a lure pad for game.
- *Instruction sheet.* Folded A-4 size paper. Contains a list of the kit's contents as well as some useful, comprehensive reference information. The back of the sheet is blank for writing notes/messages.
- *Sewing kit.* 6 x lengths of polycotton thread, 2 x buttons, a needle and a small safety pin. Uses include clothing and equipment repair. 3 or more lengths of the thread may be plaited together for use as general purpose cordage.
- *Pencil.* Golf or Keno pencil-sized. Used for writing, leaving messages, and can be shaved for firelighting tinder in poor conditions.
- *Survival playing cards.* Easy-to-assimilate reference material and memory-jogger. Morale-booster. Cure for boredom. Can be used as firelighting tinder or even as "breadcrumbs" for leaving a trail if

forced by circumstance to travel and attempt self-rescue.

The Bob Cooper Survival Kit is unusual among commercial PSKs in that it is completely serviceable straight off the shelf, and completely unmodified, will do its job. Sure, some of the individual components are not milspec, but they are all fit for purpose. I don't think it's possible for a commercial kit to include top, brand-name components. For perspective; to replace the knife and multitool with something like an \$80 Leatherman Juice, or even a \$30 Gerber Dime, or to replace the LED torch with a \$30 Mini Maglite Solitaire LED torch or the compass with a \$50 Physer-SGI brass NATO button compass would make the kit cost-prohibitive. In the Bob Cooper Survival Kit, the quality is right there where it counts.

Unmodified, I have lived out of this kit for two nights out bush as part of my research for this review. You can read about the few substitutions and additions I have made to my own personal Bob Cooper Survival Kit in the *Gear Mods* section of this issue.

Although it can be used effectively by untrained personnel, it goes without saying that

to get the most out of the kit, a little training, instruction or at least some reference reading will go a long way. For example, do you know the "V-finger" method of using a reflective surface to signal aircraft, ships or search parties? If you don't then you would not have much success in the fleeting few moments when it's needed most. It's all well and good to carry a PSK around on your belt or in your day pack, but make sure you know what's in it and practice with the various components ahead of time. In a survival situation where you're stressed, under pressure, disoriented or possibly injured, it's not the time to start taking an interest in learning about your PSK.

The Bob Cooper Survival Kit is one of only two commercial Personal Survival Kits I will at this time recommend without hesitation, and of the two, the Bob Cooper Kit is the one I have chosen as the basis of my own updated and upgraded Personal Survival Kit.

At time of writing, the Bob Cooper Survival Kit can be purchased directly from the manufacturer at www.bobcoopersurvival.com/shop/ for A\$89.95 plus postage and is available elsewhere online for around the same price.

GEAR REVIEW: THE "TIMOR" CANTEEN COVER

REVIEW BY CRAIG BROWN



Product description:
"A bushcrafty-as-hell heavy duty green canvas, wool-lined canteen cover with a hexamine stove pouch on the outside closed by a military-issue NZ-manufactured Fastex side-release buckle. Fits most military canteens from the Australian plastic 1qt canteen through to the British Osprey and 44 Pattern waterbottles with their cups as well as the Pathfinder canteen kits."

So why is it called the "Timor" canteen cover? Back in the early 2000s an Australian canvas goods manufacturer had a contract to manufacture complete sets of Australian-pattern ICLCE (Individual Combat Load Carrying Equipment) webbing for the Timor Leste Defence Force. The usual Auscam camouflage canvas was inappropriate, so it was replaced with olive drab canvas made to the same specs. Soon after, the fledgling Timor Leste Defence Force, like just about every other military service on the planet, converted to a MOLLE combat vest/body armour system, leaving most of the olive drab ICLCE web gear gathering dust in warehouses in Australia.

Timor ICLCE webbing components don't surface all that often, and to be honest, most of it's not all that useful for civilian outdoors use. Perhaps the most useful are the ICLCE bumpacks (with a shoulder strap these make a great haversack) and of course the olive drab canvas ICLCE "hexy" canteen covers, which are commonly referred to as the "Timor" canteen covers.

The canteen cover is constructed to full Australian military specifications from high quality materials. The olive drab canvas is corespun and the cover is otherwise identical to the Auscam ICLCE "Fastex hexy" covers.

The inside of the cover has an insulating/



The interior of the "Timor" canteen cover is insulated with wool - from a wool blanket. The insulation keeps the canteen cool in summer and stops it freezing in winter.

cooling layer made from 100% new wool. In fact, on the item I received, this wool lining seems to be made from blanket off-cuts. The cover's main compartment has a drainage grommet, which will be much appreciated if you ever find yourself over your waist in water during canoe/kayak trips or if you're undertaking water crossings during your foot-borne adventures.

The "Timor" canteen cover has two mounting options - a pair of nylon ICLCE clips to mount the cover to a military style webbing belt or to a pack, and an SAS-style drop belt loop which can be worn with either a normal trousers belt or an army web belt. The main closure system for the canteen cover is a basic pair of oxidised brass press studs. The main feature of



The "Timor" canteen cover with the canteen for which it was designed - an Australian plastic 1 litre canteen with its accompanying cups, canteen.



The front of the "Timor" canteen cover. With its oxidised brass press studs and ITW Fastex side-release buckle, there's not much to break or go wrong with this cover.

this canteen cover would have to be the "hexy" pouch. Originally designed to hold an old-style folding hexamine stove and a box of fuel, it's big enough to carry a comprehensive brew kit, a small first aid kit, a survival kit or a water purification kit consisting of a milbank filter bag and a packet of water purification tablets. This pouch is closed by a NZ-made, military-marked Fastex side-release buckle.

Built slightly oversized when compared to a 1970s Aussie canteen cover, the "Timor" cover is compatible with just about every military or military-style canteen out there. Here's a sample of the canteens which will fit:

- Australian/ US / Canadian 1 quart / 1 litre plastic canteen with canteen cup and stove/stand;
- Nalgene Oasis / Blackhawk plastic 1 quart canteen with canteen cup and stove/stand;
- WWII US stainless steel or aluminium 1 quart canteen with cup as well as the 1960s Japanese copies;
- British 44 Pattern aluminium canteen and cup;
- British 58 Pattern/Osprey plastic canteen and BCB Crusader cup;
- Commercial US Pathfinder stainless steel canteen, cup and stove set.

I have used the cover extensively since I purchased it a few months ago. Any time I'm not using a pack with a waistbelt out bush, I'm



The "Timor" canteen cover fits even the oddly-shaped 1200ml British army 58 Pattern / Osprey water bottles along with a BCB Crusader stainless steel cup.

wearing this canteen cover on my belt. I typically use it with a 44 Pattern aluminium canteen and cup, with a water purification kit and with a basic brew kit of coffee and sugar in the hexy pouch. Based on my own requirements I've made a couple of small modifications to my cover which can be seen in the Gear Mods section later in this issue.

The cover is a great base for a personal survival kit. It allows you to carry a water storage and processing kit - canteen and metal boiling vessel (canteen cup), plus a good-sized personal survival kit, and some extras such as a space blanket, mini Bic lighter and a candle stub all in the one pouch on your belt. Water-carriers, boiling vessels and shelter sheeting are all difficult to improvise out bush in an emergency, so the "Timor" canteen cover allows you to put all of them together in a compact package that's there when you need it.



Rear of the "Timor" canteen cover. SAS-style drop belt loop and ICLCE clips visible. Note the oxidised brass drainage grommet set into the bottom of the cover.

Mine has been drenched and sun-dried, covered in mud and sand, washed with soap and water, and apart from the colour fading a little from the hard use, the cover remains in very good nick, with no shrinking or damage evident.

Despite these covers receiving a glowing recommendation from Yours Truly, there are a couple of niggling issues as well as some fit and finish issues which a prospective end user should be made aware of. These may or may not bother you. They didn't bother me. The only issues I have identified with the cover are common to most of the Aussie/US canteen covers like the ALICE and the M56 covers as well as the old Auscam ICLCE "hexy" covers. The press studs on the main closure can jam up if they get sandy. In common with the old Auscam ICLCE Fastex "hexy" covers, I find when worn on my hip, the bulky Fastex buckle tends to become hung up on vegetation as I pass by. I'm hard on my gear and I do a lot of off-track, cross-country travel, but the average user will probably find the "Timor" covers perfect as they are.

Since these are military issued items made by a military contractor for a foreign military customer, the build quality can be rough and ready. Stitching may not be perfect in some

areas. For instance, mine has a line of stitching holes near the drop belt loop where a line of thread was unpicked due to a sewing error. It doesn't affect the serviceability of the item. You can rest assured that these covers are serviceable and are ready for some hard yakka out bush.

Availability for the covers is very good. At time of writing, they can be found at DDC (www.ddcaustralia.com.au/army-canteen-cover-canvas-olive.html) for around A\$46 before postage.

So to summarise, as a piece of gear for the committed bushgoer, I reckon it's a ripper. It's fully milspec and designed for worse punishment than the average user will dish out to it in a decade or two. It's well-designed and it allows you to carry a good selection of your most important basic emergency equipment right there on your belt.

The only downside is the high cost. If you'd balk at paying \$50+ posted for a water bottle pouch, then look for the smaller army surplus Auscam hexy canteen covers with press stud closure. These can sometimes be found reasonably priced 2nd hand, but they will only fit 1 quart canteens and cups. The British water bottles and the Pathfinder canteen kit will not fit.

GEARREVIEW: THE TERRA ROSA GEAR JAPARA TARP

REVIEW BY CRAIG BROWN

Product description:

"The Japara Tarp is a 2.3 x 3 metre rectangular tarp. This can easily sleep a few people either across the width or along the length of the tarp. It has 16 tie outs spaced evenly along each side to allow for many different set up styles. The 100% Japara cotton allows for a classic waterproof shelter."



The Terra Rosa Gear Japara Tarp. In this case it's set up in a simple "abdulled" configuration with one side lifted and propped by a couple of poles. Image via www.terrarosagear.com

While bushwalking and hiking has been traditionally seen as a pursuit which rushes to embrace technological advancements in an almost obsessive attempt to reduce pack weight, there's a burgeoning movement of outdoors folk who dislike the artificial fabrics and wish to go "organic" with their gear. This is for them.

Back in the days before nylon became ubiquitous as a tent fabric for lightweight bushwalkers, there was japara. Japara is nothing more than a 100% cotton fabric which is characterised by a high thread count and an extremely tight weave. In the past it was used as the base for oilskin and waxed cotton rain wear, windproof arctic clothing, as a fabric for tents, a down proof sleeping bag fabric and even for groundsheets and swag covers. The famous Paddy Pallin "Paddymade" bushwalking tents were made from japara cotton fabric, and when used correctly they were waterproof, warm and comfortable and were a favourite of Aussie bushgoers for decades.

Even untreated, the japara fabric is completely waterproof since once it gets wet, the fibres swell and close off the microscopic gaps between the stitches stopping water drops from entering. Like modern membrane-based



The Terra Rosa Gear Japara Tarp pitched as an "A" shelter. Image via www.terrarosagear.com

technical fabrics such as Gore Tex or eVent, japara cotton remains breathable even when soaked with water.

There was no new japara equipment manufactured in Australia for decades. With the closure of the japara cotton mills in the UK japara essentially became extinct as an outdoor equipment fabric in Australia.

...Until this year that is, when Melbourne gearsmiths Terra Rosa Gear single-handedly resurrected japara bush equipment with the release of their Japara Tarp.

If you visit TRG's japara tarp page here - www.terrarosagear.com/japara-tarp - you may notice it says "in association with Australian Bushcraft Magazine". In the interests of transparency I'd like it known that Aus Bushcraft Mag receives no cut of the sales or any royalties



The Terra Rosa Gear Japara Tarp pitched as a "forester"-style shelter. Image via www.terrarosagear.com

of any kind from the Terra Rosa Gear Japara tarp. We had been interested in reviving japara equipment for bush gear and after an intensive research project spanning several months managed to source a supplier for the correct weight of pre-shrunk japara fabric. We then simply passed on those details hoping that Evan from Terra Rosa Gear would build something epic with it. We weren't disappointed.

The Terra Rosa Gear japara tarp is made from the same weight of japara fabric as the lightweight Paddy Pallin "Paddymade" tents of yesteryear. It is a 2.3m x 3m rectangular format with a series of 16 tie-out points which allow it to be pitched in any of a dozen or so configurations. The D-ring tie-outs are reinforced with leather patches to ensure the tie-outs don't rip out in wild weather and this is a nice touch, helping to make the japara tarp a tough bit of gear. There is one slight disadvantage to the leather reinforcing patches which folks need to be made

aware of, and that is covered a little later in this review when we discuss proofing the tarp.

As expected with a TRG product, the stitching and seams are all bombproof and as perfect as humanly possible. It's a truly beautiful piece of equipment.

Untreated, the tarp weighs 1100g and even treated, mine only weighs 100g or so more.

The tarp as delivered has a raw, beige finish. This is so the purchaser may rot and mildew proof it and waterproof it themselves using either modern, store-bought chemicals, or the old-timer methods. Quickest and easiest is to cold dye it in the preferred colour (or leave it raw if you like), then hit it with some Nikwax Cotton Proof or some Canvak for added mould and mildew resistance.

In my case, I went traditional the whole way, dyeing mine to a rich brown shade with a boiled and then cooled solution of papery *persoonia levis* bark, rot and mildew-proofing it by tanning it with black wattle bark, then waterproofing it with Paddy Pallin's 1930s japara proofing recipe. I find keeping the old skills and methods alive to be a bit more satisfying than simply buying stuff in a bottle.

One thing to be aware of is that if you try to hot dye this tarp you will ruin the leather tie-out reinforcing patches which will shrink and bunch up. Trust me on this, I tested it with an off-cut supplied by Terra Rosa Gear with a couple of leather patches and tie-outs sewn on. It wasn't pretty and will destroy your tarp.

Always cold dye and use cold or warm, not hot treatments on the tarp. Heavy canvas reinforcing patches would eliminate the problem entirely.

Do NOT try to waterproof this tarp with linseed oil or similar or you'll turn it into oilskin which dramatically increases the weight and destroys the breathability of the fabric. It would be such a waste of an amazingly functional tarp.

Proofing the tarp is not necessary. in any case Using the natural properties of the japara fabric, it will still keep even the heaviest downpour off you despite no waterproofing treatments at all. However, like all the old japara gear and most modern gear, you can only put it away once its fully dry otherwise mould or mildew might set in, but unlike a modern nylon tarp or tent, you can put your japara tarp in the clothes dryer just like a bedsheet.

Sound like a bit of work? The old style stuff is more tactile and hands-on than modern nylon gear. It may be a bit more work to maintain but it's about looking after and respecting your bush gear.

If you are interested in purchasing the Terra Rosa Gear japara tarp, visit www.terrarosagear.com/japara-tarp. At time of writing the tarp sells for A\$175 posted, which I reckon is a nice price for an iconic bit of bushcraft gear.

As an aside, Terra Rosa Gear can be commissioned to make custom japara items. See www.terrarosagear.com/custom-japara for some pics of a custom-made Whelen pattern tent made from the same fabric as the japara tarp.



My bush-dyed, tanned and proofed Terra Rosa Gear Japara Tarp pitched as a hammock tarp on a recent trip. The 2.3m x 3m size of the tarp gives great coverage for hammocking and allows a bit more admin area than a smaller tarp shelter such as a hootchie. Where it really shines is as a tent replacement.

BOOK REVIEWS

This issue we review:

Wild Food Plants of Australia by Tim Low;

The Bushcraft Handbooks series by
Richard H. Graves; and

Living off the Land by the Australian Army
Education Service, circa WWII.

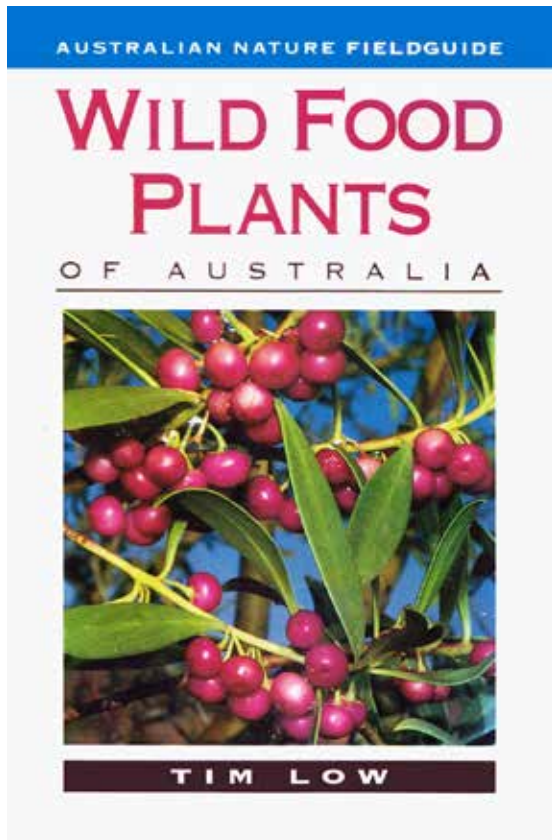
BUSHCRAFT 1 Ron Edwards
BUSHCRAFT 2 Ron Edwards
BUSHCRAFT 3 Ron Edwards

BOOK REVIEW:

WILD FOOD PLANTS OF AUSTRALIA

TIM LOW, 1991

REVIEW BY CRAIG BROWN



“Wild Food Plants of Australia” is presented in a concise, convenient form to facilitate quick and ready reference in the field. Tim Low has provided a truly reliable guide to our edible flora, making identification easy. Thus it is a perfect companion for bushwalkers, naturalists, scientists and with an emphasis on wild food cuisine, gourmets.

Low describes more than 180 plants - from the most tasty and significant plant foods of southern and eastern Australia to the more important and spectacular inland and tropical foods. Distribution maps are provided with each description plus notes on how these plants were used in the past and can be used

today.

Beautifully illustrated with colour photographs and line drawings there is also a guide to poisonous and not-poisonous plants, and information on introduced food plants, the nutrients found in wild food plants, on bush survival and how to forage for and cook wild food plants.”

There are lots of bush tucker guides out there, but most of them specialise in the desert or tropical areas of the country - areas with typically the lowest population density. What was lacking for a long, long time was a guide to wild food plants found in the more populated areas of the east coast. With *Wild Food Plants of Australia*, Tim Low filled the gap.

An Australian biologist, Tim Low is one of Australia's leading nature writers and a superb photographer. He regularly contributed to the magazines *Australian Natural History*, *Nature*

and *Health and Simply Living*. He is the author of several books on bush food and bush medicine, as well as more general naturalist topics, wildlife, and the environment.

Along with the more common wild plant foods found in the desert and savannah country, *Wild Food Plants of Australia* includes most of the more common wild food plants to be found east of the Great Dividing Range, and that makes it a valuable reference to folks who live in these areas.

From the author's website at www.timlow.com -

"First published as a hardback, this has become the standard field guide to wild foods in Australia, going through many printings and remaining continuously available since first publication in 1988.

It prioritises the edible plants of the region extending from southern Queensland to Adelaide, while also featuring the more important foods from throughout the country.

For each plant it provides a colour photo, description and distribution map. Introductory chapters explain why some plant parts are edible but most are not.

This book helped popularise bushfoods in Australia."

Wild Food Plants of Australia has become a classic reference among bushgoers of all types, from our gentlest, conservation-minded naturalists and bushwalkers through to emergency services and military personnel.

Known as the "go-to" field reference book for bush tucker, it is packed with photos, illustrations, distribution maps and detailed information on the various species. This information on each species is divided into two main sections - "Field Notes" and "Uses". "Field Notes" describes the identifying characteristics, seasonal variations and distribution details of a given species, while "Uses" concentrates on the food value and preparation methods of the plant. It also touches on other uses such as medicinal uses and usage for tools or building material.

At a bigger-picture level, the "meat" of the book, Chapter 6 *The Plants*, is divided into zones - seashore, freshwater, rainforest, open forest and arid zone. This categorisation makes it surprisingly easy to look up various plants you encounter out bush.

The table of contents of the book is as follows:

- Preface
- Introduction
- Using this Book
- The Habitats
- The Plants as Food
- The Danger of Poisoning
- The Plants
- Introduced Food Plants
- Mushrooms
- Foraging and Cooking



This page from *Wild Food Plants of Australia* illustrates the excellent photography in the book. Many of the photos in the book show species both fruiting and flowering. The amount of time and effort which has gone into the photography alone is phenomenal.

- Wild Food Nutrients
- Bush Survival
- Changes
- Appendix I - Leaf Gallery
- Appendix II - Tuber Gallery
- References
- Index

As you can see, *Wild Food Plants of Australia* covers a lot of the bases, from location and identification of plant foods to their preparation and consumption. The information on what NOT to eat is just as valuable.

The book has been criticised in some "bush food" circles for not including various plant species which are indeed edible, but it is my opinion that these omissions are warranted since there is doubt as to the safety of their long-term consumption. Since it always errs on the side of safety, I would recommend Tim Low's *Wild Food Plants of Australia* to anyone wishing to learn a bit more about bush tucker in general.

and Australian native plant foods in particular.

First published in 1991, *Wild Food Plants of Australia* has been in print continuously, at time of writing, for 23 years. That means it's almost universally seen as a reliable source of information, but over the past 23 years there has been a wealth of research into the nutrition and toxicity of, and traditional methods of preparation for, Australian bush food plants - research into oxalates in particular. I'd say the book is probably overdue for an updated edition which incorporates this new research where necessary.

Despite being so long-in-the-tooth, *Wild Food Plants of Australia* is an awesome book, one which not only deserves a place on your reference bookshelf, but also a place in your

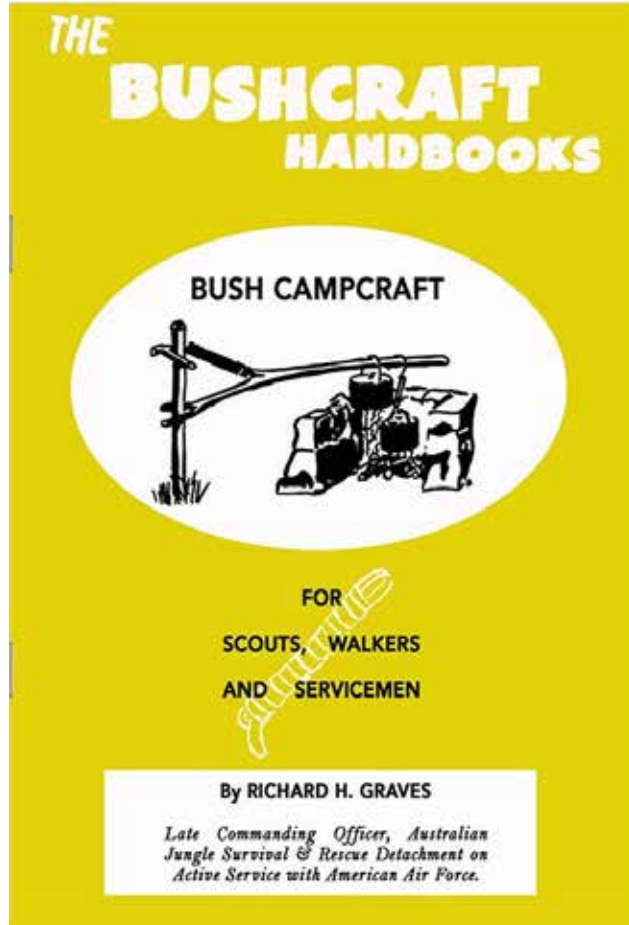
pack or haversack. Take it out bush and use it to ID a few plants and you'll be hooked. You'll probably need two copies. Being in print for so long, availability of *Wild Food Plants of Australia* both new and second hand is very good. Copies can be bought brand new from between A\$25 and A\$35 online from various retailers such as Angus and Robertson. I've seen a second hand copy in a book exchange for A\$5, but online, you'd do almost as well to simply buy a brand new copy.

At time of writing, prices for second hand copies on eBay and the various book sites vary from around A\$23 posted right up to the princely sum of A\$441.91 hoped for by one optimistic US-based bookseller.

BOOK REVIEW:

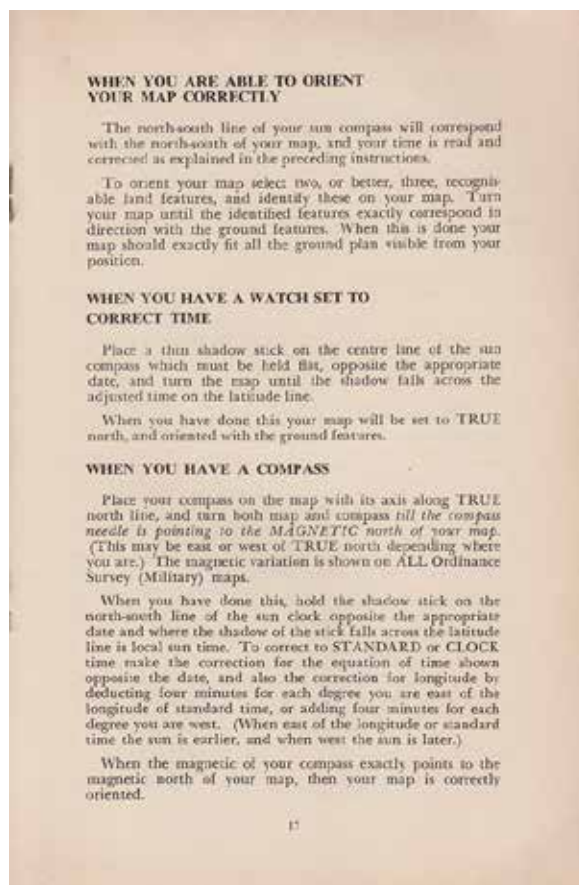
***THE BUSHCRAFT HANDBOOKS* SERIES RICHARD H. GRAVES, 1952 & 2013 REPRINT**

REVIEW BY CRAIG BROWN



"The 'Bushcraft Handbooks' were first published in Australia in 1952.

Based on the Author's wartime service in Australia and New Guinea teaching "Junglecraft" to Australian and American forces, they are distilled, concentrated old-time bushcraft knowledge, presented in a very-easy-to-assimilate format."



This page from the *Bushcraft Handbook Travel and Gear* shows the writing style to be found in *The Bushcraft Handbooks*. It's nonsense, purely instructive, practical info without a hint of fluff or padding.

You've probably already read dozens of reviews of *The Bushcraft Handbooks* or *The 10 Bushcraft Books*, and you've probably read the books themselves so this review will be a little different. Think of it as more of a buyer's guide with a bit of historical essay thrown in for flavour.

Gallipoli Veteran Richard Graves wrote prolifically on bushcraft and bush survival in the 1940s and 50s. As an Australian Army Lieutenant during WWII he was seconded to a USAAF emergency rescue squadron in New Guinea where he and a hand-picked team of Australian soldiers trained US aircrew in "junglecraft".

After the war, Graves established the Bushcraft Association which operated out of several locations in the greater Sydney area, teaching bushcraft and survival skills to individuals and to community groups such as Scouts, Girl Guides and Rovers at no cost. For more information on Richard Graves, his wartime work and the Bushcraft Association, see our profile of Graves in this issue.

Today, Richard Graves' best-known work is *Australian Bushcraft*, a bush survival and bushcraft book published in Australia and the

United States in the 1970s, a few years after the author's death. *Australian Bushcraft* has become a classic of the genre, despite the fact it was dumbed-down somewhat and sanitised by the publishers to make it more palatable for a foreign audience. *Australian Bushcraft* appears to have been subsequently reprinted in America in the 2000s as *Bushcraft: The Ultimate Guide to Survival in the Wilderness*.

Australian Bushcraft was derived from Graves' previous work *The 10 Bushcraft Books*, which was a verbatim compilation of a series of ten pamphlets known as *The Bushcraft Handbooks*.

The *Bushcraft Handbooks* series contained the following titles:

- Ropes and cords
- Huts and Thatching
- Traps and Snares
- Bush Campcraft
- Time and Direction
- Travel and Gear
- Food and Water in the Bush
- Fire Making
- Tracks and Lures
- Knots and Lashings

The *Bushcraft Handbooks* were published as individual pamphlets and were designed to be carried out bush in the rucksack or in a back pocket. Graves' justification was that a concise, single-topic paperback pamphlet was more likely to be carried and read out bush than a thick hardcover volume, and that made them a useful item for bushcraft training with the Bushcraft Association.

The original order of the titles echoed Graves' preferred logical progression of bushcraft training and identifies his Bushcraft Association training priorities.

From the title page of a first edition copy of *Bush Campcraft*, originally titled *Imvised Campcraft*:

"BUSHCRAFT is the art of living in the Bush. It develops most of the simple primitive skills and to these add some of the skills developed with our civilisation.

The practice of Bushcraft has a remarkable effect on sharpening and tuning the senses. People trained

in Bushcraft are, in general, more adaptable and successful in the art of living."

Just as Richard Graves is thanked in the acknowledgements section of Paddy Pallin's book *Bushwalking and Camping*, so is Paddy Pallin thanked in the acknowledgements of the first editions of the *Bushcraft Handbooks*. This is not surprising since Richard Graves and Paddy Pallin were good friends and had been since at least the early 1930s.

At one time, just about every boy scout in Australia would have had a set of these handbooks in their book case and school bag but since they have been out of print since the 1960s, they can be hard to find today. Good news is that there are reprints available in the same pamphlet format as the originals. There's very little, if any real difference between the originals and the reprints and the content appears to be identical. Biggest difference is that some of the reprints use original first-edition titles such as *Bush Ropemaking* instead of the later title *Ropes and Cords*.

I'd class at least 85% of the info in the *Bushcraft Handbooks* as excellent. The writing style is clear and concise, and there's absolutely no fluff. As a training pamphlet, each one of

the ten does its job. The *Handbooks* are rightly regarded the world over as a bushcraft bible, and as the most useful and instructive pams of their type ever written covering the wider topic of bushcraft. The fact that they are designed for the Aussie environment rather than some foreign, snowy mountainside in the northern hemisphere is a bonus for us living in the Wide Brown Land.

The biggest problem I have with the *Bushcraft Handbooks* is not the information, which on the whole is good, but some of the diagrams. Drawn by the author, the hand-drawn line drawings are simple and mostly to the point, but are in a lot of cases, a bit too small and somewhat difficult to read. It's a shame the author wasn't able to have his diagrams professionally drawn like they were in one of his earlier works, the 1944 book *Bushcraft: How to Live in Jungle and Bush* which Richard Graves published under the pen name "Wontolla".

For the most part the photos used in the *Bushcraft Handbooks* are great. They are clear and instructive, but a few of the original photo negatives must have been scratched up, which isn't surprising considering quite a few of the photos were taken in New Guinea in WWII while Graves was training "junglecraft" instructors.



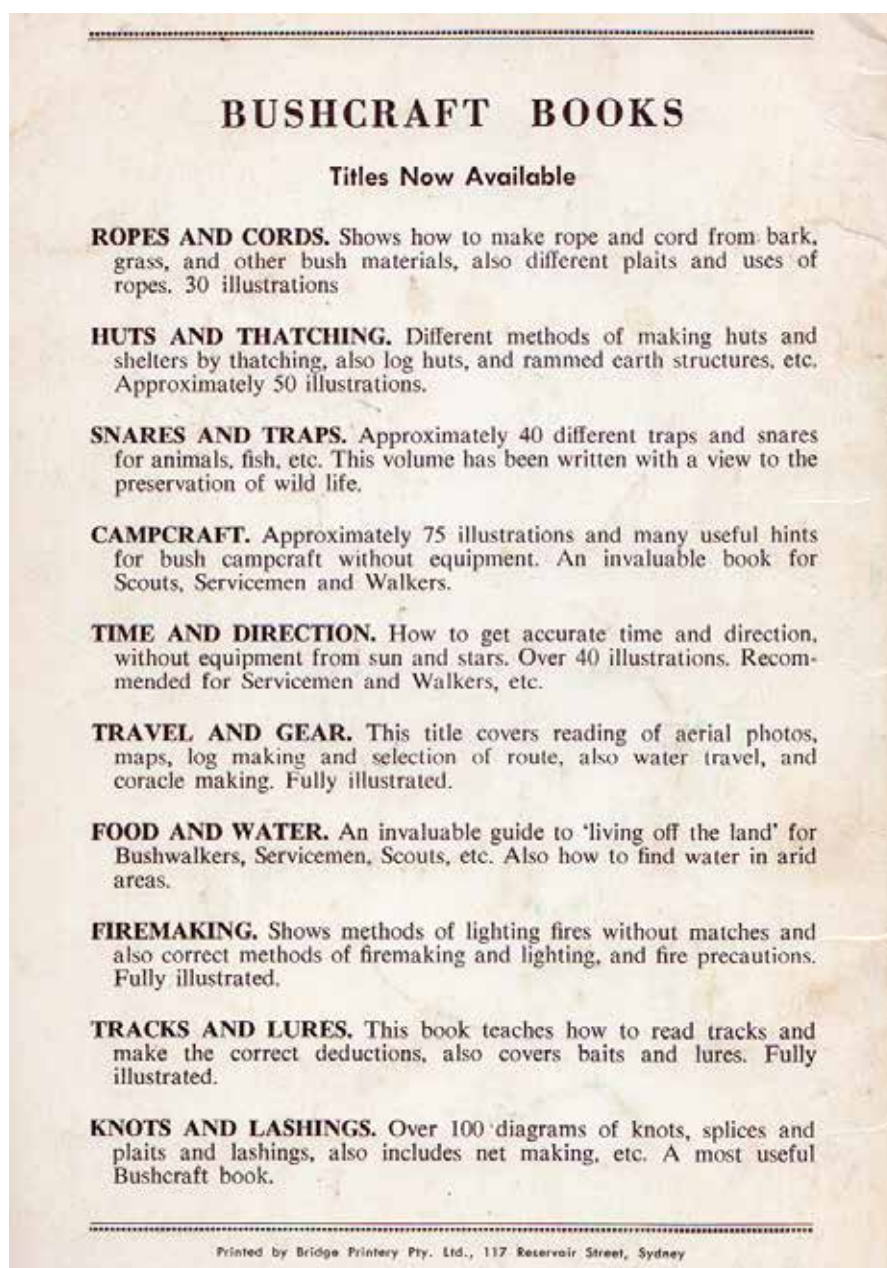
All ten of Richard H Graves' *Bushcraft Handbooks*. In this picture there are eight originals and two reprints. They were later published as the one volume - known as *The 10 Bushcraft Books*.

At time of writing, availability of both the originals and the reprints is good. Originals can be found on ebay or through both Australian and overseas second-hand book sellers with prices for the individual pamphlets starting at around A\$10 plus postage, up to around A\$35 plus postage. It's worth keeping an eye on eBay particularly if you're after a set of the originals, since you can sometimes find them offered up as pairs or even as a complete set.

I collected my set of originals this year over a period of around 6 months, but prior to that I was quite happily using a set of the reprints.

Reprints are available all over the place. Cheapest is Amazon, where they are being peddled for between \$7 and \$9 each at time of writing before postage. They sell on ebay for around A\$13 each including postage from one UK seller, and prices from there go up to an eye-watering \$40 - that's about a dollar a page.

Sure, the *Bushcraft Handbooks* are historically-important and are awesome as training aids and for reference but these are only short pamphlets, typically between 35 and 60 pages long so make sure you don't pay too much. It may be that unless you're following Graves' teachings to the letter, including his bushcraft training philosophy, you'd be better off looking for one of the later compilation volumes such as *The 10 Bushcraft Books* or *Bushcraft - a Serious Guide to Survival*



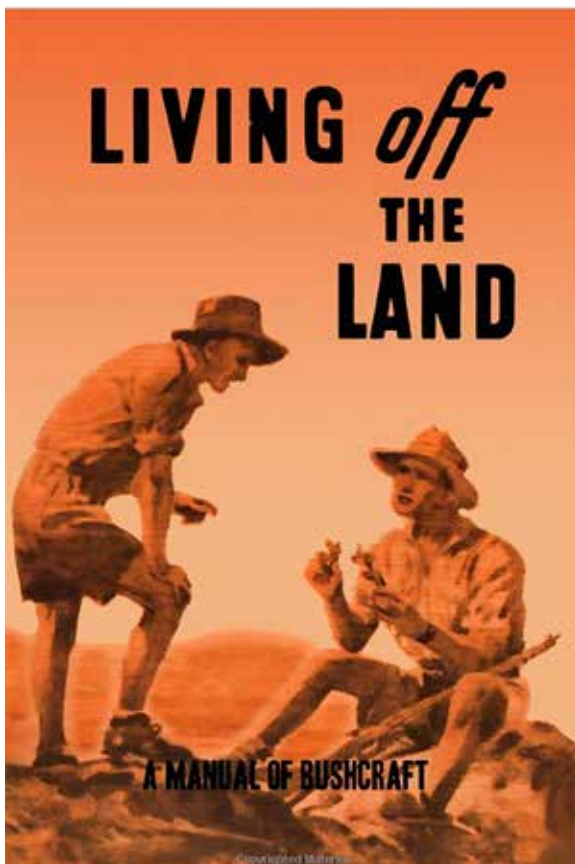
The back cover of the original *Bushcraft Handbooks* lists all ten of the handbooks along with a summary. The handbooks are:

- *Ropes and Cords*
- *Huts and Thatching*
- *Snares and Traps*
- *Campcraft*
- *Time and Direction*
- *Travel and Gear*
- *Food and Water*
- *Firemaking*
- *Tracks and Lures*
- *Knots and Lashings*

and *Camping*. I'd recommend staying away from *Bushcraft - the Ultimate Guide to Survival in the Wilderness*. Since the Amazon preview pages show a bunch of editorial errors, and badly-copied diagrams, my faith in the content of that book is shaken enough that I probably won't ever purchase a copy of that one.

BOOK REVIEW: *LIVING OFF THE LAND* AUST. ARMY EDUCATION SERVICE, 1944 & 2013 REPRINT

REVIEW BY CRAIG BROWN



During World War Two, the Australian Army Education Service published a fortnightly magazine called *Salt*. From 1942 until 1944, *Salt* often included articles on survival topics, referred to as “bushcraft” or “living off the land”. Many of these articles were written by HA Lindsay, the Army’s chief bushcraft instructor who would later go on to write *The Bushman’s Handbook* (reviewed in the Launch Issue). Another major contributor of survival-themed articles to *Salt* was legendary Australian bushman, Gallipoli Veteran and author Ion L Idriess.

“A Manual of Bushcraft compiled from articles contributed to “Salt”, the Army Education Journal - 1944”

In 1944 a compilation of these bushcraft and survival articles was published as *Living Off the Land*. Made available for general publication by the army, all proceeds of the public sales of the book went to the Legacy Clubs of Australia, a charitable organisation which then, as now, provided support for dependents of deceased Australian service personnel.

The blurb inside the front cover of the book reads as follows:

“Living Off the Land” does what its title indicates. It tells you what to do if you get “bushed”; how to find food and water where the quest looks hopeless; how to guard your health; how to avoid dangers and extreme hardship. It is full of fascinating facts and out-of-the-way knowledge. In addition it contains chapters by eminent medical authorities on how to avoid the twin scourges of malaria and dengue fever.”

I’ll start off the review proper with the bad points. This book is definitely a product of wartime. The original 1944 copy is poorly printed on cheap paper. It’s also a product of the prejudices of its day. It is packed with the then-commonly-used derogatory names for Indigenous Australians, Papuans and islanders. There doesn’t appear to be any malice involved in it, just the names. I find it odd that it appears

in such a book at all. Contributor HA Lindsay co-wrote several books on Australian Indigenous culture, while the other major contributor Ion L Idriess spent time actually living with Aboriginal people on Cape York in the 1920s.

With the 2013 reprint, the quality issues are non-existent. It has pretty much the same high quality paper, printing and binding as any modern paperback, probably even a little better quality. The language has been toned down too, perhaps making it a bit more acceptable to modern sensitivities.

The book is broken down into the following chapters

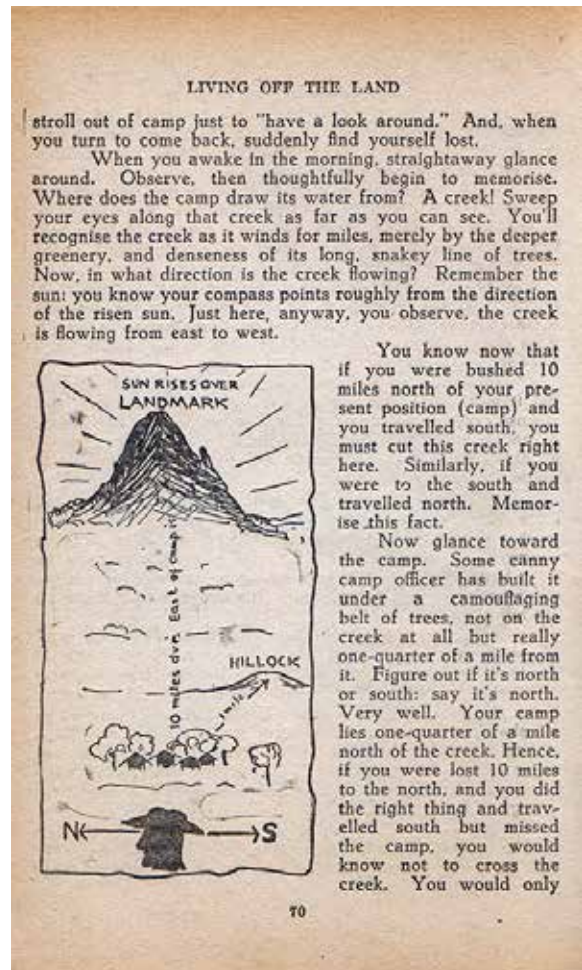
- General principles of bushcraft
- How to eat
- How to drink
- How to make your way
- How to keep well
- How to know the pests
- How to make and mend
- How to know the natives

The book is packed with useful tips and techniques, but beware of the first aid and general medical advice - it's about 70 years out of date, and it shows! Also, the plant food section is a bit dismal. How people were expected to identify native food plants from the info in the book, I have no idea. For period plant ID information, you'd be far better off with a copy of the excellent US Army Technical Manual of the same era, *Emergency Food Plants and Poisonous Plants of the Islands of the Pacific*.

The chapter on water ("How to drink") is excellent, showing various ways of securing a drink using methods as diverse as pulling up tree roots, to sinking your own improvised well.

The chapter on travel and navigation ("How to make your way") includes a wealth of bush lore and old timer knowledge which is usually only seen in the likes of Ron Edwards' *Bushcraft* series of books.

Perhaps my favourite part of the book is the chapter called "How to make and mend". This includes information on distilling good water out of salt water, fire by friction, fire lays, rope and knot-work. The "How to Make and Mend" chapter also includes plans for HA Lindsay's own design of one-man tent. This is made from unbleached and un-proofed light calico instead



This page from the 1944 edition's chapter on "How to make your way" shows the writing style and the touches on some of the old-timers' improvised navigation methods.

of heavy rubberised canvas or oilcloth. The tent sheds water by relying upon the angle of the pitch to "turn the rain" rather than on heavy waterproofing compounds - old-time bushman's knowledge in action. In fact, the design of the tent isn't too bad and would be quite easily constructed from 70D coated oxford nylon easily enough at home on a domestic sewing machine for a modern update. Another interesting section in the same chapter deals with mess tin cooking, improvised petrol "Benghazi" cookers and the like.

In all, I think either edition of the book is a worthy addition to your bushcraft and bush survival reference library as long as you understand the book's limitations.

At time of writing, availability of both the original 1944 edition and the 2013 reprint is good. Original 1944 editions can be found on ebay for anywhere between about A\$50 and A\$110, used, but the condition varies. 2013 reprints are still in print and can be found new on Amazon or other online booksellers for between US\$12 and US\$45.

VIDEO REVIEWS

This issue we review the original 1986 1-hour *Bush Tucker Man* documentary, and the WWII RAAF survival training film *Living off the Land*.

VIDEO REVIEW:

LIVING OFF THE LAND **ROYAL AUSTRALIAN AIR FORCE, WWII**

REVIEW BY CRAIG BROWN



"Q220105 Major VH Chargois was one of the Australia's foremost bush tucker experts during WWII and ran survival courses for AIF and Militia troops as well as for Australian, US and Dutch aircrew, special forces and special intelligence personnel. The film was produced using the syllabus of Chargois' Special Forces Jungle Food Course and details many types of bush tucker plants found in Northern Queensland and around the Pacific. Importantly, it also provides information on water procurement, firemaking and signalling."

Living off the land" was a hot topic in Australian military circles during the Second World War, and rightly so. Huge distances, desolate scrub country, fresh-waterless atolls, clinging lowland jungles and towering, razor-backed mountains... these are just some of the terrain types flown over by Royal Australian Air

Force aircrews. On some long distance missions from mainland Australian airbases to targets in New Guinea or the Netherlands East Indies, the crew of an RAAF or USAAF bomber or transport aircraft could reasonably expect to fly over all of the above.

Aside from the threat of being shot

down by enemy fighters or flak, a mechanical failure or even a slight navigation error could see an airman forced to bail out and parachute into unfamiliar country with only the clothes on his back, and a knife and a MIS-X kit on his belt. Unless there was time for a proper location fix and a distress call, chances of search aircraft finding the hapless airmen in good time were slim. That left only one course of action - self-rescue. The airman would be forced to make his own way through unfamiliar country and through enemy-occupied territory to either the nearest friendly forces or to a "Roger Point".

"Roger Points" were clandestine MIS-X supply caches dotted around the southwest Pacific area for use by aircrew and special forces evaders. A "Roger Point" typically contained rations, fresh water, survival gear, weaponry and radio equipment for signalling search and rescue. Depending on where they came to grief, the downed airman may have to travel for weeks or even months on foot to reach safety.

A D-Ration chocolate bar and a tin of malted milk tablets can only be strung out so far, so the location, identification and preparation of wild food was right up there competing with those other priorities of wartime long-term survival and evasion; water, shelter, protection, navigation and signals. It is against this backdrop that the 1944 Australian training film "Living Off the Land" appeared.

"There are many hundreds of food plants, some rich in starch and sugar, others containing the ingredients which prevent scurvy and other similar diseases; there are the larvae of insects which you can eat, and also a number of small animals, including birds, which you can trap and snare, and so have enough meat to nourish you through the weeks which may elapse before you find your way to a base or are rescued.

People have been known to starve to death in the midst of plenty simply because they did not recognise edible foods and know how to prepare them for eating. Of the thousands of potential food plants in the tropics the few pictured in this film were selected with the advice and assistance of specialists as being among the most nourishing and most readily found and recognised.

However much you may benefit from the film, you are strongly urged to learn to recognise the plants and

other foods in the particular area to which you have been assigned. You will have time to wander a few miles from your base, preferably under the guidance of somebody familiar with the district, and learn first-hand the plants which you can eat and how to prepare them for food. Such a trip will not only be interesting - it may someday save your life."

So says the super text at the beginning of the film.

A few minutes into the film begins a bit of a scripted "reenactment" showing an RAAF airman forced down in unfamiliar country without either a knife or any matches. Not surprisingly, the airman perishes, and his remains are found just a day or two later by a 3-man Australian army rescue party rather carelessly swinging around a US machete and a V44 survival knife.

The film first expounds on the importance of bringing a dirty great knife and a box of matches with in case you are forced down. It also promises to show how you might make fire without matches, but I believe this is only the first of a two-reel film and the fire-making information is not included.

The subject then turns to water and ways to get it. Methods of water procurement demonstrated are:

- Water from saplings
- Water from "water vines"
- Water from Lawyer vine
- Water from Coconuts

Plant foods are then discussed:

- Coconut
- Yams
- Taro
- Cassava
- Wild Ginger
- Sugar Cane
- "Wild Walnuts"
- Quandong
- Pandanus
- Grass Tree

Fire:

- Setting fire to the dry leaves of a grass tree as an instant signal fire.

The film is interesting because in parts it shows how traditionally native foods from areas of the Pacific Islands such as taro and cassava need special preparation before they can be edible. These are techniques which are often described in books, but rarely seen as instructional film clips.

The film is definitely a product of its era. The scenes showing a bloke with a cane knife chopping into the heart of a hundreds-of-years-old grass tree to demonstrate eating the young shoots had me wincing, but in the dark days of the Second World War, conservation was the last thing on their minds.

Some parts are a little fuzzy, not only the pictures, but the information. The film doesn't

further describe the "water vines" or the "wild walnuts", so the average soldier, sailor or airman of 1944 would have had little chance of correctly identifying them. Some species of large jungle vine are packed with oxalate crystals, so correct identification is important - especially for an evader behind enemy lines. The jungle foods course upon which the film is based was very comprehensive and was taught by Major VH Chargois, an expert in the wild food of Northern Australia and the Pacific, who appears as a member of the search party at the beginning of the film - wearing the officer's peaked cap.

Despite the inclusion of some nice and obscure bush and jungle survival techniques, overall the film does a poor job as a training tool. The film is accessible on youtube by searching for "Australian WWII Survival Training Film - 'Living Off The Land' 1944" or it may be directly accessed here - https://www.youtube.com/watch?v=EP_rGYih55I&list=UUzIbW4_-45oNT8Xg0PBFi_Q

VIDEO REVIEW:

BUSH TUCKER MAN **AUSTRALIAN DEPARTMENT OF DEFENCE** **PUBLIC RELATIONS, 1986**

REVIEW BY CRAIG BROWN



"Ethno-botanist Major Les Hiddins is a soldier with a unique job. He is studying the natural survival resources of the vast remote wilderness of north Australia, learning, mainly from Aboriginal people, about the native bush food and medicine that has sustained their culture for more than 40,000 years. It is the first study of its kind in the 200 years of European settlement of Australia and is providing valuable information which will greatly assist our soldiers in both war and peace should they ever have to survive in such inhospitable regions."



In this still from the documentary, Les Hiddins crosses the lower Ord river at Ivanhoe Crossing near Kununurra in the far north east of Western Australia. The vehicle is a Toyota HJ47 Land Cruiser troopcarrier as used by the Army's NORFORCE, 51st FNQ Bn and Pilbara Regiment at the time. His now-famous General Service Landrover didn't appear until the wildly popular spin-off TV series which followed this documentary in 1988.

The Australian Army had a keen interest in survival and living off the land on the Australian continent in the Second World War years, but post-war, defence priorities shifted and the Southeast Asian region became the focus of strategic planning.

By the early 1980s, Defence strategy had come full circle and focused again on the defence of Australian soil. Sadly, by this time the institutional memory of all the WWII-era bush survival and bush tucker knowledge had been all but lost. Rather than try to recover the survival and bush tucker knowledge lost and then try to separate the wheat from the chaff, the Army started again from scratch at the urging of a young Aviation Corps officer named Les Hiddins.

In 1980 the army awarded Major Hiddins a 12-month Defence Fellowship to study ethno-botany at James Cook University in Townsville. Ethno-botany can be defined as *"the scientific study of the traditional knowledge and customs of a people concerning plants and their medical, religious, and other uses."*

A former Infantry rifleman with two tours in South Vietnam as a forward scout under his belt with 6th, 7th and 1st Battalions, Royal Australian Regiment, Les' bushcraft had been honed from a childhood spent in North Queensland. In 1970 Les graduated from the Officer Training Unit at Scheyville in NSW as a Second Lieutenant and he transferred to the Army Aviation Corps in 1974.

In 1975 he led the Army's Pudding Pan Hill Expedition to find explorer Edmund Kennedy's death site near Shelburne Bay on Cape York. This was an adventure training activity and despite his existing bush knowledge, the expedition proved to Les that they had only ever scratched the surface when it came to bush tucker and bush medicine, and that such information would become extremely

valuable should the Australian army ever be forced to fight on Australian soil. So began an odyssey of survival training and research.

By 1981, Les had been put in charge of Australia's special forces survival training for units such as the SASR, Army reserve Commandos, and the Regional Force Surveillance Units. In 1982 he raised the army-wide Combat Survival Project out of Lavarack Barracks in Townsville.

A large part of the Combat Survival Project dealt with identification and cataloguing of survival resources for a given area, and then publishing them into a format which was easily assimilated by the soldiers who needed it. There were three types of Survival Resource guides published. These were: Regional Survival Booklets, Survival Card Packs, and Survival Resource Sheets, otherwise known as "Snack Maps".

Les Hiddins would spend more than 10 years out bush in the Pilbara, the Kimberleys, Arnhem Land, Cape York, the Gulf Country and the Central and Western Desert country conducting field research, collecting samples and sending them down to the Defence food laboratories at Scottsdale in Tasmania for analysis.

In the middle of this program, in 1985, the Department of Defence's Directorate of Public Relations began seeking to improve its relationship with the community at large through press releases detailing interesting ADF-related stories. One of the stories which attracted much interest from the newspapers was about a 38 year old Army Major conducting field research into traditional Aboriginal bush food and bush medicine plants solo in remote areas. Soon, filmmaker Vince Donovan, under contract to the Defence Public Relations film unit, put together a 60-minute documentary on Les Hiddins' work cataloguing survival resources in northern and central Australia.

In Cape York and the Gulf Country, Les was known to local aboriginal communities as the "Berry Man", but in Arnhem Land, they called him the "Bush Tucker Man", and this name was chosen as the title for the documentary.

So there's a little about how the original 1-hour Bush Tucker Man doco came about.

Produced as it was at the behest of the Department of Defence for public relations purposes, it focuses mainly on the survival resources project.

The film goes into some detail about the methodology used to identify and catalogue the survival resources of an area as well as the dynamic of Les' working relationship with the local Aboriginal communities, whose traditional knowledge was crucial to the success of the project.

When talking about the medicinal uses of the kino from the desert bloodwood (*Corymbia terminalis*), Les describes how the sap had been analysed at the labs in Tasmania and had its antiseptic properties confirmed and verified.

"But", he says "Aboriginal people always knew that".

With many of the members of local Aboriginal communities at the time being slowly "urbanised" and losing their traditional knowledge, Les Hiddins sought out the older people. When it comes to ethno-botanical issues, the ones to talk to in a remote Aboriginal community are the ladies, since traditionally the women-folk did the gathering while the men did the hunting in most cases. It's not surprising that most of Les' Aboriginal teachers were the women.

Some of the useful plants described in the film are :

- Bulrush (*Typha Orientalis*),
- Cocky apple (*Planchonia careya*),
- Bloodwood (*Corymbia terminalis*),
- Cluster fig (*Ficus racemosa*),
- Boab tree (*Adansonia gregorii*),
- A certain species of acacia,
- A certain species of wild yam,
- Edible and non-edible varieties of bush tomato (*Solanum spp.*),
- Pandanus palm (*Pandanus spiralis*),
- Water lily (*Nymphaea gigantea*), and more.

Aside from the plants, various edible or otherwise useful insects are described:

- Green ant (*Oecophylla smaragdina*),
- Native stingless bee (*Tetragonula carbonaria* formerly *Trigona* sp)
- Witchetty grub (*Endoxyla leucomochla* moth larva),
- Edible insect galls.

Shellfish:

- Certain mangrove snail species
- Mud whelk (*Telescopium telescopium*)

Reptiles:

- Centralian blue-tongued skink (*Tiliqua multifasciata*)

Of all the plant species described in the film, one of the most exciting and important from a long-term bush survival/living off the land perspective would have to be the Billygoat Plum (*Terminalia ferdinandiana*) which is widespread throughout the Kimberley and to the far eastern edge of Arnhem Land. Now known as the Kakadu Plum, the Billygoat Plum was, as part of Les' research, sent down to Tasmania for analysis where it was found to contain 20 times the vitamin C content of an average orange.

The local Aboriginal people used the billygoat plum as a bush medicine rather than as a food item, and this piqued Les' interest.

A food with such a high concentration of vitamin C is immensely important to troops forced to subsist off the land since it will reduce the instance of scurvy or beriberi. This is just one way in which the survival resources project bore fruit... pardon the pun.

In all, the film is great introduction to the bush foods and bush medicine of northern and central Australia..

The filmmakers won several awards for the film and it attracted such public interest that the Australian Broadcasting Corporation in 1988 screened the first of three series of *Bush Tucker Man* which ran on Australian TV for years and has been seen throughout the world.

The original Department of Defence Bush Tucker Man documentary can be accessed by searching YouTube for "Original Bush Tucker Man Documentary" or it may be directly accessed from www.youtube.com/watch?v=02eQszDVC5o.



In this still from the film, Les Hiddins breaks open a green ant nest to get to the larvae. He informs us that the green ant has two survival resource factors - it's useful as a food and it's useful as a medicine.

BUSH TUCKER

VARIOUS METHODS FOR PRESERVING YOUR TUCKER OUT BUSH

CRAIG BROWN

Food preservation is essential out bush unless you're living a traditional hunter-gatherer lifestyle and surviving on what animals you can hunt or plant foods you can gather. Hunting and gathering is a full-time job and seasonal variations in food availability were the main reason for the Australian Aboriginals' nomadic lifestyle. If you prefer to stop in the one spot for any length of time, you need to be able to hunt/gather once and eat from the spoils many times. That means having some way to preserve your tucker.

*Meat smoking over a campfire.
CPH 3b26206*

If, God forbid, the average modern Aussie was to remain out bush without their trusty Engel fridge, battery, generator and/or solar panels to keep the beer and Coca Cola cool, then how could they even hope to keep proper food for any period of time? Easy, they'd take a massive esky packed with block ice and they'd restock with ice, fuel and Paddle Pops at the next roadhouse... That's not exactly what we're talking about here. Perhaps I should have titled this article "Where there is no Engel".

Back in the BeforeTime, that dark and primitive age when Engels hadn't yet been invented, folks in the bush still had a need to preserve their tucker. Whether it was because they'd killed a beast or had an excess veggie crop or were going droving, it was then, as it is now, far easier and less wasteful to carry preserved food than to hunt, slaughter and gather it as you go.

There are several methods which can be used to preserve food out bush. It really depends on what the food is and what your environment is like.

FOOD SAFETY

If you're going to preserve your tucker, it's important to avoid the growth of bacterial or fungal enzymes in the food which will make you sick. Bacteria and other micro-organisms occur naturally in animal flesh and vegetable matter, and when the food is "dead", they start to multiply in order to begin decaying the food. The ultimate goal of food preservation is to stop or at least slow this process.

If you can't begin preserving your perishable food immediately, then eat what you can and discard the rest. Becoming deathly ill from food poisoning in the scrub is no-one's idea of fun, whether it's a bush survival situation or on a minimalist camping trip.

The information presented here is general in nature. Before testing any of the methods described, it's important to undertake your own research and balance the risks of illness or even death against any potential reward.

FREEZING AND COLD STORAGE OF FOOD

If you're in the high country in the good weather from mid Spring to mid Autumn, you may notice there's still standing patches of snow, particularly in shaded spots around large rocks

and in depressions on sloping ground, etc. You can freeze meal-sized portions of your food by burying it in hard-packed snow overnight.

If you're in the one place for any period of time, the food will keep as long as it is buried in the snow, and if you're on the move, it will be good for as long as it takes to thaw out. Be aware that animals can still smell frozen food in the snow and can uncover it just as easily as you buried it.

To thaw frozen food quickly for immediate cooking and consumption, the food can be placed into a billy or canteen cup of hot water until thawed. If it is not required immediately, i.e. required for a meal in a few hours, it can be thawed in cold water. This delays the growth of harmful bacteria.

In wet and windy winter weather, you can freeze your food by simply wetting it and hanging it up overnight, exposed to strong, cold winds. Depending on the weather, by the wee hours of the morning it may be frozen solid.

To keep frozen food as long as possible, it is necessary to keep it insulated. Wrapping tightly in newspaper, paperbark or even wool or polar-fleece clothing will help to delay thawing.

In hot areas, root vegetables such as native yams, cultivated potatoes, carrots, sweet potato, onions, etc. can be kept for longer periods in a static camp by using an ancient aboriginal method. Similar in concept to a root cellar, any veggies which are low in moisture content can be kept for weeks by burying them deep in the ground. Cool soil and low moisture content has a preserving effect.

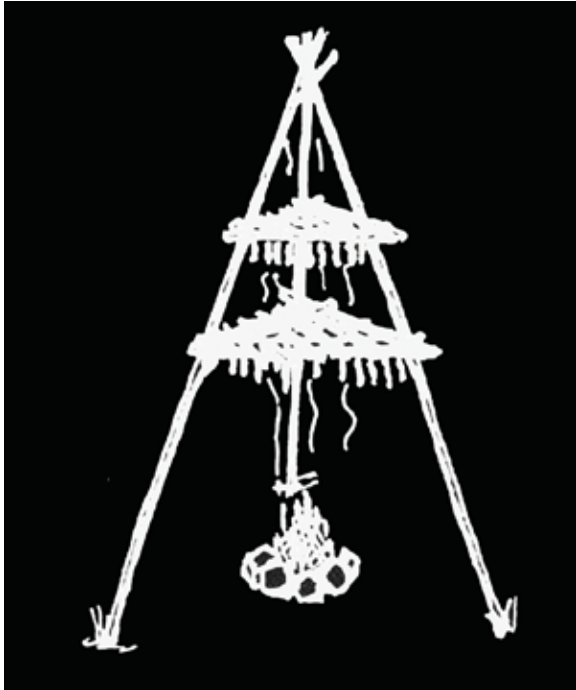
It's not exactly preservation, but a method of keeping drinking water cool relies upon evaporative cooling in the same way as a flax water bag or a Coolgardie safe. A normal canteen, wrapped with several layers of cloth - like a spare t-shirt or a shirt - and wetted down thoroughly, will cool up to 15 degrees below ambient temperature if left in a shaded place exposed to the wind.

If you have a cool creek, river, spring or dam nearby, you can cool your drinking water to the temperature of the creek water by leaving your canteen in the water until needed.

Fresh food stored in cold water may not be "preserved" per se, but it will be quasi-refrigerated and depending on the water temperature, may be good for another day or so.

DRIED FOOD

As long as meat or fish is still fresh, it can be dried into jerky or biltong. Once it starts to



A simple tripod for heat-drying jerky and biltong using heat from a low fire. The meat or fish strips may be threaded onto wire or it may be laid over a platform of sticks as seen in this diagram.

go off, the decay can't be reversed. The fresher the meat or fish is when you start to preserve it, the longer it will last when dried. With both jerky and biltong there are safety procedures to follow to avoid food poisoning. These procedures appear below.

Jerky is the quickest and easiest way to dry food. The resulting jerky can be eaten raw, ground to powder and mixed with animal fat to make a pemmican, or it can be soaked for a few hours then used for cooking as you would use fresh meat strips. Beef is the most common meat used for jerky, but any lean meat can be used. Kangaroo in particular makes great jerky. Fish, reptile and bird meat can also be used.

Meat for jerky must be as lean as possible. Remove all fat before slicing, because fat will go rancid and will reduce the shelf life of the finished jerky. Slice the meat against the grain and into thin slices no more than about 1cm thick. The thinner the meat, the more thoroughly and quicker it will dry. Slicing against the grain results in a finished product which is easier to eat and quicker to soak than if you had sliced with the grain. It will also reduce the storage life, so if that is a major consideration, then slice it down the grain.

The drying process is not always hot enough to kill or retard the growth of micro-organisms, especially when using a bush-made drying setup. There's a couple of ways to fix this problem - first is to boil your strips of meat for 3-5 minutes before hanging them up to dry, and the second is to fry the finished jerky strips in a

frypan or on a heated flat rock for 5 minutes. It's up to you.

Jerky can be dried in the sun, but at certain times of the year, this is a slow process, taking a couple of weeks in some cases. At the height of a dry summer you could expect a batch of jerky to take up to three days. To speed the process in cooler weather or during the wet season, you can use low heat from a fire. Using a little wire from your PSK or pack repair kit or vehicle toolbox, skewer the meat strips and form a hoop with the wire, making sure the strips of meat are not touching each other. Hang the wire hoop from a tripod made from deadfall sticks and place it over a low fire which is kept chugging along with the meat strips sitting near the top of the heat column from the fire so they receive dissipated heat which isn't hot enough to cook it. If flies become a problem, throw a few wood shavings onto the fire to produce a little smoke. Shavings from casuarina, ti-tree and many wattles are suitable, as are most eucalypts. Just be sure that you're frugal with the shavings, you don't want billowing clouds of smoke. Too much smoke from some of our native trees can render a batch of jerky inedible - wattles in particular are notorious for this. Once the outer layer of the meat has developed a hard crust, it can be removed from the fire and dried the rest of the way in the sun. The hard crust will prevent blowflies laying their eggs on the meat.

The jerky should be ready after about two days in direct sunlight. You'll know it's ready when it looks shriveled and brown, and bends but does not break. It should be (just) edible without damaging your teeth.

The terms "Jerky" and "Biltong" are often used synonymously, but for our purposes, we'll call the thin dried strips detailed above jerky, and the ones we're about to describe, biltong. Biltong is a South African Afrikaner word which, literally translated, means "rump tongue". This refers to the appearance of the completed biltong, long, wide and thick strips of beef or game animal steak which look vaguely like a tongue... I suppose. Dried biltong can be eaten uncooked or soaked and used for cooking. Biltong requires the use of salt, so unless salt is carried, it's probably only feasible to make biltong if you're near the coast and can boil seawater to make a concentrated brine.

To make biltong, cut the meat along the connective tissues joining the muscles so they are left whole. Cut off any fat as well as the sinewy ends of the muscles and slice the meat lengthwise with a very sharp knife. A sharp knife is important since jagged cuts attract fly-strike. The resulting slices of meat should be a couple of times thicker

or wider than those used for jerky. 1cm thick and 3cm wide is a good measurement to work from. Salt the meat strips and pack them overnight to absorb the brine. You can use a plastic bag, bit of nylon or the animal's hide as a container.

Before you hang the strips, dip them in boiling water and then immediately hang the strips over wire or thin sticks in direct sunlight. At night-time, as per the jerky, you can keep the strips drying over a low fire.

Depending on weather conditions, the biltong should take four or five days to cure. It can be eaten "raw" or soaked and then grilled or chopped for use in stews.

Neither biltong or jerky should be stored in plastic, since it will "sweat" and eventually mildew and go off. Instead, store in cloth or paper.

Most fruits and some vegetables can be preserved by drying in the sun. As with jerky, it should be sliced thinly and then dried in direct sunlight or on racks over a low fire. Typically, fruits and vegetables will take a little less time to dry than jerky strips of the same size.

Dried fruits can be eaten as a snack, as is. Dried vegetables are best chopped finely and boiled before eating. The water the vegetables were boiled in is nutritious and should be saved

as a stock or drunk as a soup, never wasted.

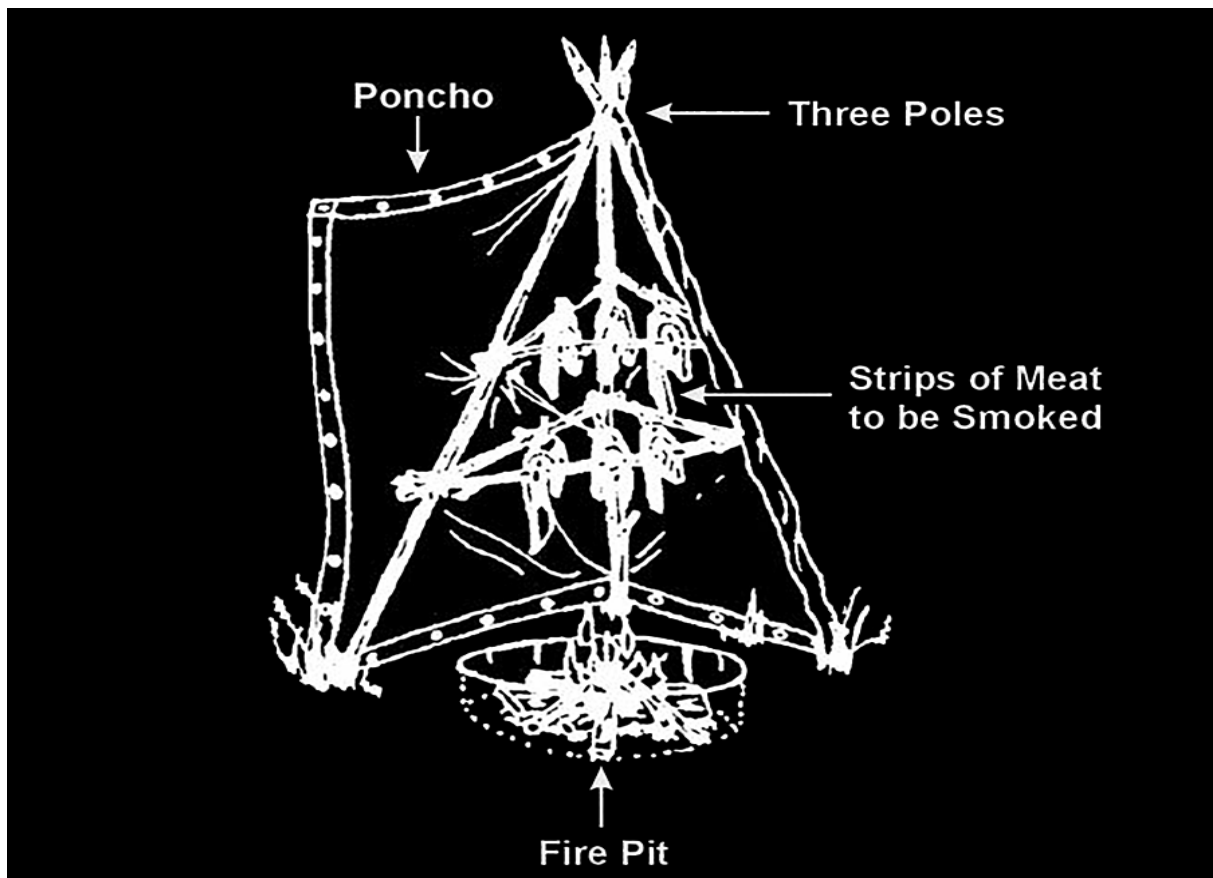
SMOKED FOOD

Smoking meat is a similar procedure to making biltong or jerky, but more smoke is required and it is smoked for longer. The result is a softer meat which lasts for a few weeks and can be eaten as is, or used for cooking.

Smoking is best accomplished using a tripod and racks made of wire or sticks. It is as effective for fish as it is for beef or kangaroo. For best results and the longest shelf-life, salt is required, but it isn't necessary for a shorter shelf-life.

If you have salt available, prepare the meat as per biltong - salt and let sit in a container overnight to draw out a lot of the moisture. Salted or not, cut the meat into strips or thin steaks and place on the racks, ensuring that the pieces of meat don't touch.

Once again, a low fire is built and the tripod and racks moved over it. Hardwood shavings are added to the fire to generate the smoke, and a tee-pee or cover is put over the tripod to keep the smoke in as long as possible. A rain poncho is a perfect cover, but the cover can



A meat smoker constructed using a poncho as a cover. If a poncho is unavailable, you could thatch a covering from grass or fronds, or you could pile green leafy branches against the tripod to form a cover. Whatever you use, the cover just has to keep the insects off the food.

be made from hessian bags or even improvised from leafy branches.

Keep the fire low so as not to set fire to your cover and do not try and generate smoke with green or dead leaves. These will release oils and sap which condense on the outside of your food and can make it inedible. Instead, use a hardwood fire of eucalyptus, casuarina, etc. and generate smoke using shavings of the same wood. If there's nothing else available, dried cattle dung will work and food smoked with it is quite safe to eat. The smoke should always be blue/grey. If it's white, it probably contains a high proportion of steam, which will not dry your food. If it's black, that means some sort of plastic or rubber has gotten into the fire and the smoke will taint your food.

Smoking will take at least 24 hours and the food will be ready when it is a uniform tan to orange colour all the way through when sliced.

Unsalted, the smoked meat will last a couple of weeks. Salted, it may last a month or two.

SALTED FOOD

Salting is used mainly for fish and vegetables. If you have a supply of potassium nitrate then you can use it and table or rock salt to salt meat. Pickling in brine may be used in

an emergency, but it's something to do at your own risk since salt does not actually kill harmful bacteria.

To dry-salt fish, remove all the bones, the head and the entrails. Fillet the fish, or if it's a small fish, cut out the backbone and lay it flat. Cover both sides of the fish pieces with salt and rub in well. A rule of thumb is to use a quarter of the fish weight in salt.

The salt draws moisture out of the fish and inhibits growth of bacteria. Place salted pieces of fish one on top of the other and any resulting brine will drip down to the bottom piece. Alternate them every day or so. Merely salted, fish will keep for several weeks. To make it last indefinitely, cut the salted fish into strips and sun or heat dry like jerky.

Salted or salted and dried fish can be eaten as is, or it can be boiled for half an hour, the boiling water changed and then boiled for another half an hour to remove much of the salt before eating or further cooking it such as frying or grilling for taste and texture.

Fresh or blanched vegetables can be dry-salted in a similar way to fish. Again, a good rule of thumb is to use a quarter of the food's weight in salt.

Place a layer of salt in a rust-proof, water-tight container then cover with a layer of vegetables. Add alternating layers of salt and vegetables until the required amount is reached,



*Salted beef and salted pork being braised in a cast iron Dutch oven after being thoroughly squeezed dry to remove the worst of the salt.
United States National Parks Service*

or the container is filled, whichever comes first. Over the first 24 hours, the salt will draw moisture from the vegetable, creating a brine. Add more salt and a little water until the top layer of vegetables is under the surface of the brine. Try to keep as cool as possible. The salted vegetables will keep for around two months in field conditions.

To prepare the vegetables, they can be boiled to leach out much of the salt and cook the vegetables at the same time.

Meat may be wet-salted by cutting into meal-sized chunks and rubbing thoroughly with salt. The meat chunks are then placed into very salty water (salty enough that it will float a fresh egg) and boiled, then left in the water. This is essentially corned beef and it will last for weeks, if not months if not removed from the water except to use. To prepare, the salty water is squeezed or pressed out of a piece of beef and it is then boiled and sliced or diced for immediate use.

Old-style salt beef was used by explorers, sailors and stockmen and was a dry-salted product. In his *Bushcraft* series, Ron Edwards describes the process of preserving beef by dry-salting:

"The salting of meat is a fairly simple process. The beast is sliced up into as many cuts as possible to provide the maximum surface on which the salt can be placed. Big slabs of meat are avoided as the salt would not be able to penetrate them. All fat is carefully trimmed off..."

...The cuts of meat are laid on a sloping bench and well covered with rock salt. In stock camps a piece of corrugated iron usually does for the bench. The salt is rubbed into the meat and it is then left to drain. Stations usually have fly-proof meat houses specially for this job, but in the stock camps the meat is covered with a layer of gum leaves to keep off the flies. The leaves are taken off each evening after dark, the meat turned and re-covered with salt. New leaves are put on before the flies arrive in the morning.

The effect of the salt on the meat is to draw off all the liquids, and this is why the bench is set at an angle, allowing the juices to drain away from the meat. Curing is considered finished when the meat will no longer dissolve any salt and is bone dry

The salted meat is stored by hanging it in a dry and airy place and it does not have to be covered as flies are no longer interested in it. I have only ever had the

*need to keep meat for a month or so, but have been told that it will keep for well over a year if the weather is dry."*¹

To prepare for eating, the chunks of salt beef are boiled in a couple of changes of water to remove much of the salt and then they can be sliced, and traditionally served with damper. When made into a casserole or a slow-cooked camp oven stew, salted beef tastes nearly as good as fresh beef.

COOKING FOOD FOR PRESERVATION

As you know from looking at the contents of the fridge after any BBQ, casserole or pizza night, cooked food leftovers can last for a week or more in the cold environment of the refrigerator. In the field, cooked leftovers or meat cooked for the specific purpose of preserving it, can last a day or so longer than raw meat when boiled, fried, grilled, baked or steamed.

Meat can also be preserved for a week or more by cooking it and then, while still very hot, covering it completely with molten animal fat to completely seal it from the air.

Cooked meat should be eaten cold.

TOASTED FOOD

Edible grains or seeds can be toasted (the term "parched" is often used to describe this method in the Northern Hemisphere) by cooking in a hot fry pan, roasting in an oven or by sun drying on a hot surface. The seeds are both dried and cooked, and will last a long time. If the toasted grains or seeds are crushed to the consistency of dry porridge mix, it can be carried dry and mixed with a little water to eat as a porridge or cook in the coals of a fire as a damper. Husked wheat, barley and rice, as well as lentils, corn kernels and peas are the most commonly used grains and seeds for toasting. Corn, lentils and peas can be eaten in their whole, toasted form without requiring soaking, grinding or boiling.

Toasted seeds and grains will last indefinitely, are light to carry, contain a maximum of calories, and are easy to prepare.

¹ *Bushcraft 3 - More Traditional Australian Bush Crafts - Ron Edwards, pp 61-62*

SHELTER

THE HOOTCHIE- THE ORIGINAL LIGHTWEIGHT AUSSIE TARP TENT

CRAIG BROWN

Army Public Relations photo of the first issue of hootchie, circa 1959-60. The image also shows the individual mosquito net, air mattress and tropical sleeping system in use. Next to the LCPL's left boot is the complete shelter and sleep system rolled up and ready to go.

NSN 8465-66-013-5032 Shelter, Individual. The famous Aussie hootchie.

Also known by its military designation of "Shelter, Individual", or as a "hutchie", the hootchie is a simple concept. It's nothing more than a 600-700g 2.7m x 1.75m sheet of proofed nylon with a plethora of press studs around the edges, grommets, eyelets for integrating a mosquito net, and a series of sewn-on tie-off loops.

Despite being designed to be pitched as a one-person tarp shelter, the modular nature of the hootchie allows for two or more to be clipped together to make a larger shelter. The hootchie may also be used as a waterproof sheet for an improvised bush shelter, a camp tarp, a rainwater catchment, a hammock tarp, flysheet for a tent, swag cover, stretcher, hammock, emergency boat sail and much more.

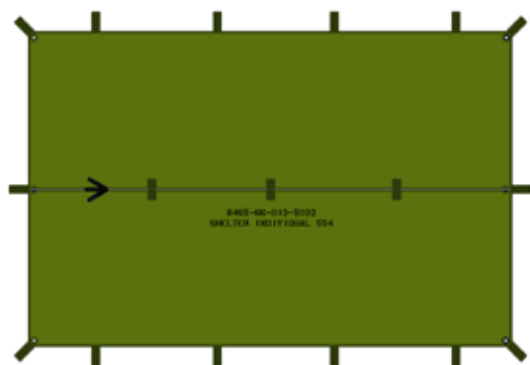


Diagram of an army-issue hootchie showing the general layout and configuration of grommets and tie-off loops. Press studs and mosquito net eyelets not shown.



The hootchie in "Abdulled" mode, in this case pitched with the mosquito net.

HOOTCHIE CONFIGURATIONS

Methods for pitching and using the hootchie are limited only by the imagination but let's take a look at some of the more common and useful configurations.

The Army A-Frame



The Army A-Frame hootchie in action. In this instance, the sides are pegged directly to the ground in storm configuration.

Not actually framed at all, this configuration is the most commonly-used and is the "official" method for pitching a single Australian Army "Shelter, Individual". Tie the ends of the hootchie to trees (or guy-lined hiking poles if you carry them)

just above thigh height, then simply peg out the corners. In bad weather, peg the corners directly into the ground for a low-profile, but very weather-proof and wind-proof sleeping shelter.

In better weather, leave a 10cm or so gap between the edges of the hootchie and the ground. Peg down using pre-tied hootchie cord loops. This configuration gives better visibility and airflow, making it especially useful in hot/humid climates.

Army procedures for hootchie-pitchin' state that a shallow trench should be dug around the perimeter of the hootchie, allowing any water to run off, but I would suggest that this is a method which should be reserved only for those times when you're expecting seriously wet weather otherwise it's a waste of time and effort and leaves a scar on the landscape unless carefully filled in and flattened out. In anything but a tropical downpour, slinging the hootchie low and then pegging the corners directly will keep you dry.

A slight modification of the Army A-Frame is the "Abdulled" configuration. Named after the old Paddy Pallin tent configuration from the 30s and 40s, it simply involves lifting one side of the hootchie with locally-found deadfall sticks. This increases the shade area of

the hootchie, gives more room inside and improves both visibility and air flow.

The Army A-frame configuration is also designed to be used with an individual mosquito net in tropical climates. A description of the method for integrating a mosquito net with the hootchie appears in the sidebar.

The Surface OP



The Surface OP hootchie in action. Low profile and provides good protection from wind and rain.

"OP" is the acronym for "Observation Post" and this is one basic method of hootchie-pitchin' used by those folks in uniform who tend to carry long lenses, shredded hessian and camo painted chicken wire around with them. It's a low-profile method which is useful for wildlife watching and I guess for stealth/low impact camping.

All four corners are tied off to surrounding vegetation at around knee height and from the most central loop is tied a line to overhead or nearby vegetation in order to provide more headroom inside the shelter. This configuration provides weatherproof overhead cover and provides for reasonable airflow and observation. If a low-profile is not required, the same type of configuration can be pitched at waist or even shoulder height. Slung high, this configuration makes a great camp tarp/eating area.

The edges of the quite noticeable shadow which is cast by this configuration can be minimised by breaking up its outline with scrim netting, strips of cloth, sections of vehicle camouflage net, or by piling up bushy vegetation around the perimeter of the shelter. Of course, the average civilian hootchie user need not concern themselves with such things.

USING A MOSQUITO NET WITH THE HOOTCHIE:

The army-issue mosquito net is designed to integrate with the hootchie and either an old-fashioned army groundsheet or an army air mattress cover. The mosquito net has tie-outs on the four corners, and it has a nylon cloth skirt around the bottom perimeter of the net.

Step 1 -

Pitch the Army A-Frame configuration with only one side pegged out. Lay down the groundsheet. In this case we're using an army air mattress cover in lieu of a groundsheet. The groundsheet provides a "seal" between the mosquito net's skirt and the ground which ensures that no creepy-crawlies are able to make their way inside the netting from beneath.



Step 2 -

Using the attached cords, tie two corners of the mosquito net to the eyelets located on the short side of the hootchie.



Step 3 -

Tuck the side skirt of the mosquito netting under the groundsheet. You can add extra tie-out cords to the ends of the net to allow more headroom.



Step 4 -

Peg out the other side of the hootchie and tie off to the side eyelets. The shelter is now insect-proofed.



The Lean-To



The Lean-to configuration pitched high for maximum shade on a hot day in a swag camp.

The most basic of all the hootchie configurations, the lean-to is one of the most useful configurations for directional protection from sun, wind and to a certain extent, from light rain or snow. The lean-to configuration is also useful as a windbreak for a hammock camp in cold weather, when used in conjunction with another hootchie or with a specialised hammock tarp.

For the best balance between shade, wind protection and rain protection, pitch the lean-to at about waist height, and peg out the rear edge at around a 45 degree angle using guy ropes or small poles made from deadfall sticks.

With so much open area, the lean-to is not the most effective configuration in strong wind and rain since the weather can easily blow in from the sides. However, this is an advantage in hot weather as it allows for great airflow in even the slightest cooling breeze, while providing great shade.

The Hammock Tarp



Hootchie used as a hammock tarp in "Diamond" configuration. Note the short diagonal corners are held up by deadfall "poles" to increase shade area and airflow in hot weather.

The hootchie makes an excellent hammock tarp and can be pitched as such in a variety of different ways, the most common being the "A-frame" configuration and the "Diamond" configuration.

Of the two, the A-frame requires the most amount of hootchie cord and pegs, but has quite good coverage. To pitch the A-frame over a hammock you need to either tie a ridge line for the tarp or simply tie off each end to a suitable tree. Tie guy lines to each of the four corners and peg them out. It is essentially an Army A-frame configuration pitched high and with a hammock slung underneath it.

The Diamond configuration is quick to pitch and strike. Tie off the long diagonal corners between two trees, tie guy lines to the short diagonal corners and either tie off to surrounding vegetation or peg them out. Use of short pieces of deadfall timber as tarp poles. This will increase shade and airflow using this configuration.

The Swag



The hootchie used in swag configuration with a sleeping bag. Note the groundsheet it's laying upon for protection.

The Hootchie is large enough to work as a single swag cover. Bedding is arranged on the opened-out hootchie, which is then folded and clipped together to act as a water and wind-proofed bed roll cover.

For best results, the foot end of the hootchie can be folded over and if desired, the flap at the head end can be kept open with an improvised pole made from deadfall sticks.

To avoid damaging the waterproofing of your hootchie, it should always be used with a groundsheet while in swag configuration.

Like any swag, the bedding may be rolled up in the hootchie and carried with a shoulder strap. This allows you to simply unroll the bundle and roll out the bedding quickly and easily.

In areas where the user may need to jump out of the bedroll quickly, it is better to tuck the sides of the hootchie underneath you, rather than clipping it all together. This means you won't be struggling to unwrap yourself or unclip the sides if you need to exit the swag in a hurry.

The Two-Person Tent



Hootchie in Two-Person tent configuration.

Clip two hootchies together and they will make a larger, A-frame-style shelter suitable for two or even three people and their equipment. For one person, this type of shelter is useful in a longer-term camp environment as a primary shelter or as a tarp for equipment or stores.

Like the Army A-Frame configuration, the Two-Person Tent configuration can be pitched "Abdulled" with one of the sides held up with poles and guy lines, then pegged out.

The Two-Person tent configuration will also work with one or



Detail of the ridge overlap on the two-person tent. Make sure it's folded over properly to ensure water runoff.

more army issue mosquito nets.

To pitch the Two-Person tent, fasten together the press studs running down the long sides of the two hootchies. Tie the hootchies to the trees/poles at around shoulder or head height, and peg out the sides at around a 45 degree angle so that the shelter becomes a large A-frame with open ends.

Make sure that all the press studs are fastened properly before pitching and that the overlap at the ridge is properly folded over to allow water runoff.

The Taj Ma-Hootchie



Six-Person A-Frame Taj Ma-Hootchie constructed from three hootchies. Note the use of a deadfall stick as a pole - you don't always need a perfectly-situated pair of trees to pitch a hootchie.

Clip two or more hootchies together and you have the Taj Ma-hootchie, a palatial, sprawling shelter which can be pitched in any number of configurations. The most common configuration is probably the Six-Person A-frame.

In this configuration, three hootchies are clipped together on the long sides and the resulting Taj Ma-hootchie pitched at around shoulder height. The sides of the hootchie can be pegged directly into the ground during bad weather, or they can be held high with guy lines, bush poles, or a combination of the two for maximum visibility and airflow.

The Taj Ma-hootchie is also a good choice for horseback, kayak or vehicle-borne travel. The light weight of the three hootchies (around 2kg total) and the compact nature of them when folded or rolled, means it's easy to find room in any packed-to-the-gunwales vehicle, watercraft, pack or bag. In camp, the 3-hootchie Taj Ma-hootchie makes an excellent shade cover, admin area or dining fly.

TIPS FOR USING THE HOOTCHIE

- Don't completely clear the ground inside your hootchie. Remove rocks or sticks, but leave the leaf litter as it is. Clearing the area disturbs insect life and may also cause rainwater to form a muddy pool under your groundsheet rather than running under it and draining away.
- Always use in conjunction with an insulating layer or camping mat. In cold weather especially, the ground will sap the warmth right out of you. Even laying on a mylar space blanket will help. If you have a 3-cell army air mattress cover, it makes a great palliasse cover when filled with grass, bracken and the like. Fill it with she-oak leaves and it's like sleeping on a down-filled mattress.
- In warm weather you can increase your comfort in the hootchie by digging a "hip hole" under your groundsheet. Not actually a hole, it's a shallow trench about as long as your body is wide. Be sure to fill it in when you're done.
- Since thin hootchie cord can be difficult to untie in cold and wet weather, consider the use of 550 paracord for the ridgeline or ridge tie-off cords. When pitching the hootchie in the army A-frame configuration with visibility and ventilation in mind, it's often easier to have 30-40 cm lengths of 550 paracord or hootchie cord already attached to the perimeter of the hootchie with loops pre-tied and ready to peg down.
- Ockie straps or shock cord are great for a hootchie's ridge line as they are self-tensioning even in high winds and are somewhat easier to undo when wet than basic hootchie cord.
- While store-bought tent pegs are useful, they are not necessary for pitching a hootchie. Tie off to surrounding trees, shrubbery or rocks and if you need pegs, carve some from deadfall sticks. They will be 90% as effective in most cases as the store-bought variety.

SOME OTHER USES OF THE HOOTCHIE

Stretcher - Clip the long sides of a hootchie together and insert two bush poles into the envelope created. The stretcher will allow two or four people to carry a casualty easily.

Hammock - Gather the short ends of the hootchie together into a bunch at each end, knot and tie off with hootchie cord. Securely tie a toggle rope or 2m length 1-inch tubular tape to each end. To sling the hammock, simply tie the toggle rope or tubular tape to a tree at each end. Another hootchie pitched over the top as a hammock tarp completes the ensemble.

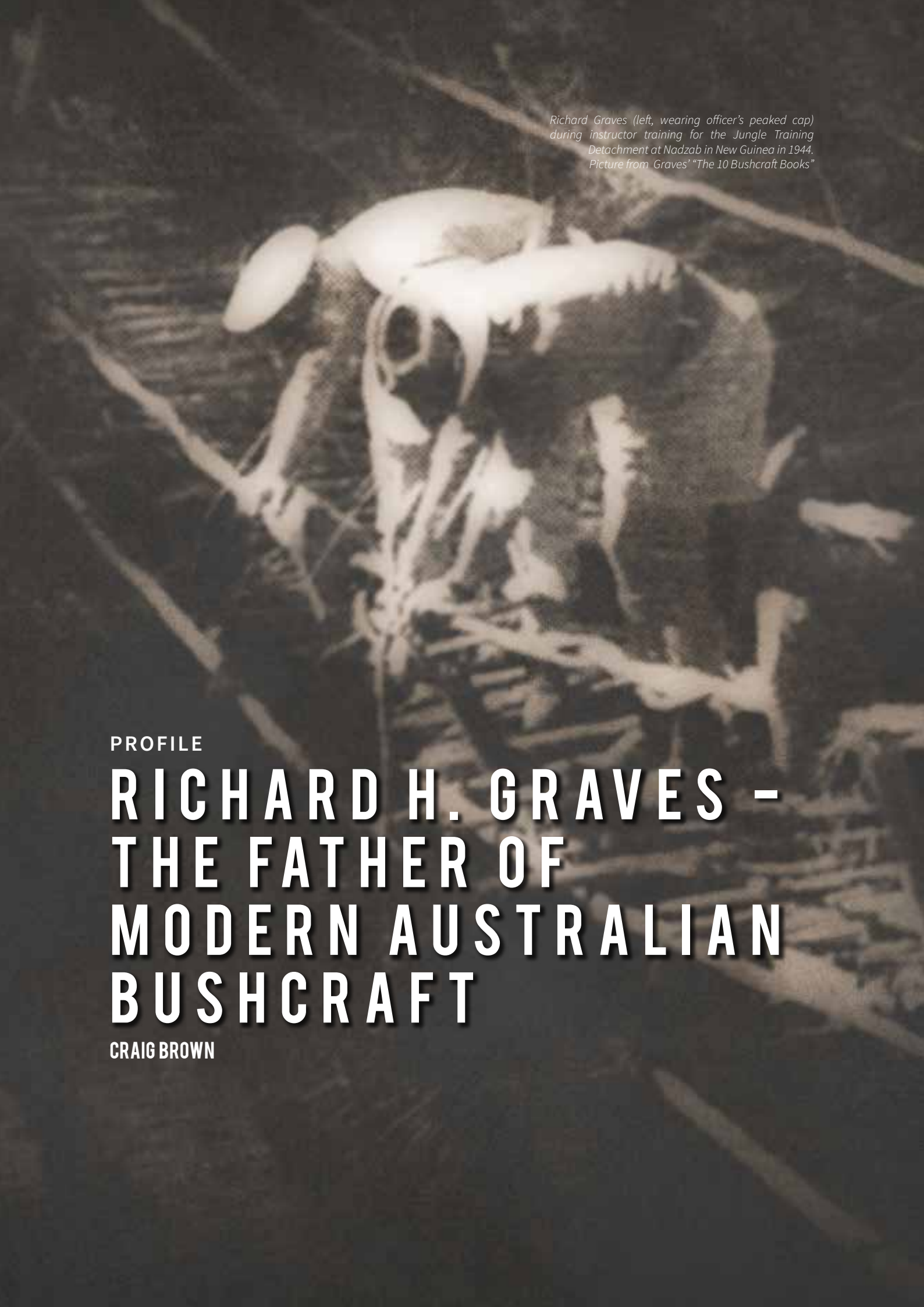
Water collector - With such a large surface area, the pitched hootchie is perfect for collecting water during rain showers. Simply place a canteen or canteen cup at the lowest point of the hootchie so that the water runoff is directed into the bottle or cup. Another method useful for catching bulk amounts of rain water with a single hootchie is to kick a depression in the soil and lay the hootchie in it. The rain will fill the hootchie-lined depression and the water can be scooped out with a canteen cup or billy can.

Raft - For water crossings, wrap your pack in one or more hootchies and tie securely to waterproof it. Provides excellent flotation. Several hootchie-wrapped packs may be tied together to form a multi-person raft.

Emergency Sail - Can be used with watercraft such as kayaks, canoes, zodiacs or tinnies. Lash two or more paddles or oars together as a mast and tie on the hootchie to act as a mainsail.



NORFORCE patrolmen conducting a dead motor drill off the Kimberley coast using a hootchie as an improvised sail.
ADF photo



*Richard Graves (left, wearing officer's peaked cap)
during instructor training for the Jungle Training
Detachment at Nadzab in New Guinea in 1944.
Picture from Graves' "The 10 Bushcraft Books"*

PROFILE

RICHARD H. GRAVES - THE FATHER OF MODERN AUSTRALIAN BUSHCRAFT

CRAIG BROWN

Richard Harry Graves, known to his mates as Dick, was an Australian bushcraft and survival expert before his time. Gallipoli veteran of the First World War, scout leader, bushwalker, whitewater canoeist, jungle survival training instructor and rescue officer in New Guinea in the Second World War, writer, publisher, founder and head of the Bushcraft Association, conservationist, marketer and visionary... Richard Graves was able to fit a lot into his 73 years on Planet Earth.

Today, Richard Harry Graves is relatively well known as the author of *The 10 Bushcraft Books*, but until now, little has been publicly known of his life apart from the publishing company's author blurb on the dustcover of his books. I hope this article offers a little more insight into the man and his life and times.

EARLY LIFE

Richard Graves was born in County Waterford in Ireland in 1897. He was nephew to author, poet and literary critic Robert Graves. Richard's mother, Jane Graves (nee Hawkesworth) died from illness in 1907, and in 1909 his father, Christen Graves emigrated to Brisbane, leaving Richard and his older sister Phyllis in the care of relatives for almost three years. An unaccompanied minor, 14 year old Richard Graves disembarked from the *SS Runic* at Brisbane on the 30th of October

1911. 16 year old Phyllis remained in Ireland.

Richard was reunited with his father at his home in Manly near Brisbane. As a partner in the successful Graves and Butterworth Timber Merchants Company in Wynnum, Richard's father Christen could afford to send Richard to the Queensland Agricultural College at Gatton where he would learn the ways of Queensland farming.

It was here, working outdoors under the bright Queensland sun that the young Richard Graves kindled his love of the Australian bush. By 1914 Richard was working in various agriculture-related jobs and it seemed he would follow this path as a career.

Then war was declared in August of 1914 and it changed everything.

THE GREAT WAR

Soon after the outbreak of war Richard enlisted in the militia, the army reserve of its day. As a lad of 17 he joined the Kennedy Regiment company at Bowen in northern Queensland where he had been working as a farm labourer.

Some members of the unit were deployed to guard a radio facility on Thursday Island. A further group were sent north and invaded what was then German New Guinea. Richard and the bulk of the company stayed put on a part time basis, tasked with undertaking various defence roles in the Bowen



White Star liner, the SS Runic. Launched in 1900 and built specifically for the England to South Africa to Australia run she was unusual in that there were no first class staterooms or steerage berths. Class distinction among passengers was nonexistent. Tuck's Celebrated Liners postcard of the SS Runic circa 1908.



Diggers of the Australian and New Zealand Division at ANZAC sniping the enemy with a periscope rifle in mid 1915.

military area. Richard found that the military life agreed with him.

By August of 1915, with his father's permission, 18 year old Richard enlisted in the regular army, the Australian Imperial Force. As a fully-trained militiaman he was able to skip much of his army recruit training and was shipped off overseas on the 16th of August 1915, just two weeks after taking the Oath and signing his name on the dotted line.

After a two week voyage and four weeks of advanced training in Egypt he landed on Gallipoli as a reinforcement for the 25th Battalion almost 100 years to the day before the original publication of this article.

A month later he was severely wounded in the left foot by Turkish shrapnel in Reserve Gully while the men of the Battalion were doing their best to improve the trenches prior to the worst of the coming winter snow which had just begun to fall.

Richard Graves was medevac'd by ship to Malta just days before the ANZAC forces began their evacuation of the Gallipoli Peninsula.

Taking longer than usual to recover due to the severity of his wounds and a secondary infection, Richard was in hospital for three months before rejoining his Battalion in Egypt. As a unit, the 25th Battalion embarked by ship from Alexandria, Egypt headed for the Western

Front. They arrived in Marseilles, France 5 days later. As the first Australian Imperial Force Battalion to arrive on the Western Front they were thrown straight into action in the trenches.

Graves was slightly wounded in June, 1916, just a couple of weeks before his Battalion was sent into the wasteful meat grinder that was the Battle of Pozieres. Here the 25th Battalion would suffer 785 casualties, losing almost three quarters of its strength.

By September 1916, the filthy conditions in the trenches saw Richard suffer from debilitating skin infections which put him out of action and into hospital for three weeks. Although not completely recovered, he was transferred to the 7th Light Trench Mortar Battery, an artillery unit. Suffering greatly from nearly untreatable skin infections and their resulting septic sores, he was hospitalised for a few more weeks before being sent back to the trenches.

Richard soldiered on for another 9 months until July 1917 before collapsing at his post. Running a dangerously high temperature, he was sent to an Australian casualty clearing station and then to the British 1st General Hospital at Étretat in the Normandy region of France where he was diagnosed with Pyrexia of Unknown Origin which



Two men from Richard Graves' unit, the 7th Light Trench Mortar Battery, operating their mortar near Villers-Bretonneux in July 1918.
AWM E02677

is a fever of 38.3 degrees or higher which lasts for more than three weeks, for which there is no known cause.

After convalescing, he rejoined his unit three weeks later and served in the trenches for another two months as a gunner and ammunition runner during the various offensives in the Villers-Bretonneaux Sector. During a large-scale German bombardment of his unit's position, Richard Graves was wounded in action for the third time, copping a shrapnel wound to the right leg which put him out of action for just over three weeks. He rejoined his unit in early November 1917. It was in late 1917 that 19 year old Richard Graves first began to find himself in trouble with his superiors, when he was charged with "Insolence to a superior officer" and had 7 days' pay forfeited.

Over the next ten months Richard took part in the massive Allied offensives which, with the last-minute injection of manpower from the newly-arrived US expeditionary forces, would ultimately fight the Germans to a standstill and force them to the peace table.

The First World War officially ended at 11am on the 11th of November, 1918 but it would be months before the men of the Australian Imperial Force were brought home.

Across the Australian Imperial Force there was discontent which in some cases led to outright mutiny by whole war-weary units who had been sent into battle again and again with no let-up and then, after the Armistice, forced to wait for months in France or England for transport back to Australia. It is no surprise that in late December 1918, after war's end, Richard Graves found himself undertaking Field Punishment No. 2 for 7 days and forfeited another 7 days' pay for "Disobeying his superior officer".

Field Punishment No. 2 meant that the offender was shackled or tied up for a good portion of the day and when not in shackles and leg irons, was forced to undertake hard labour under the watchful eye of the provost or military police. Among some of the Diggers of the first AIF in France and Belgium at this time "collecting" field punishments was seen as a bit of a game. Richard was lucky that he wasn't sentenced to Field Punishment No. 1, which was identical to Field Punishment No. 2 but also involved shackling the offender to a fixed object for hours on end.

As a 1915 enlistee, Richard was high on the list of AIF Diggers to be repatriated back to Australia, but it would still be a couple of months before he would return to Australian shores. During this time he went AWL (Absent Without Leave) with a few mates for three days, living it up with the mademoiselles in the drinking establishments and cafes of Hazebrouck, southeast of Calais near the English Channel.

Adding to his small "collection" of disciplinary offences, Richard was sentenced to another 7 days of Field Punishment No. 2 but this time he forfeited 10 days' pay. With an AIF Private in France receiving 5 shillings per day, that 50 shillings (A\$210 in 2015), was quite a financial hit.

Finally, on the 7th of April 1919, Richard Graves embarked on the troop transport *Trasos Montes* in Weymouth Harbour bound for Australia.

FRIENDSHIP WITH PADDY PALLIN

By the mid-1920s, Richard Graves had worked hard to put his war experiences behind him and had abandoned his plans to become a farmer. Relocating to Sydney, he worked in marketing and advertising sales and soon found solace in the bush by taking up the popular hobbies of bushwalking and whitewater canoeing.

With a move to Lindfield in northern Sydney, Richard found himself living just 400 yards from the home of Englishman and WWI Royal Air Force veteran Frank "Paddy" Pallin who had emigrated to Australia in 1926. Paddy was what we today might call a "gear freak". Unable to find good outdoor equipment such as rucksacks and tents in Sydney, Paddy resolved to make his own and then sell them to a hungry community of bushwalkers and campers in Sydney and beyond. He set up shop in a spare room in his Bent St Lindfield home and began churning out equipment.

Richard Graves shared Paddy Pallin's love for the Australian bush as well as Paddy's desire for decent bush gear and the two became fast friends. They soon recognised that each could help the other. Paddy would provide good gear to Richard at mate's rates while Richard would use his marketing nous to help kick-start Paddy's burgeoning gear-making enterprise, "Paddymade".

Richard soon came up with a plan which would not only see Paddymade become a successful business, but would see Paddy himself become an acknowledged expert, not only in the field of equipment manufacture, but also in bushwalking and canoeing. He'd continue to make his tough and reliable Paddymade gear, but he'd cement his position as an expert in two different ways - by participating in the outdoor community at large as a valued member, and by writing a book on how to do the same thing.

Paddy ran with the plan and created relationships with every outdoor recreation club in Sydney from Myles Dunphy's Mountain Trails Club to the River Canoe Club along with being a founding member of the Sydney Bushwalkers and establishing the Search and Rescue arm of the

NSW Confederation of Bushwalking Clubs. The first edition of Paddy Pallin's book *Bushwalking and Camping: a Manual of Australian Bushcraft* was eventually published in 1933 and is still in print today in its 14th edition. Paddy Pallin OAM passed away in 1991 at the age of 90 years. While the Paddymade brand of locally-made equipment may have died out in the late 1980s, outdoor gear retailer Paddy Pallin Pty Ltd is still going strong and is now under the leadership of Managing Director Tim Pallin, Paddy's own grandson. Like his grandfather, Tim Pallin is an acknowledged expert in the field of outdoor recreation in Australia.

It's all because Paddy started to make bushwalking gear on a treadle sewing machine in the back room of his Lindfield home, and because his mate Dick Graves suggested he write a book about bushwalking back in the 1930s.

SCOUTS

Richard, in 1928 married the love of his life, Jessie and together they had a total of five children. Richard's association with the bushwalking fraternity in general and with Paddy Pallin in particular led him to the Boy Scout Association. It was at this time, training to be a scout leader, that Richard Graves first began to learn about bushcraft and bush survival. His own teachers were old bush-bred scoutmasters who had grown up in the bush in the late 1800s and were consummate bushmen. Richard was taught about bush foods and how to find water where it seemed there was none. This kick-started a burning passion for bushcraft and he began to research and learn as much as he could.

Richard Graves' scout leader's name was *Wontolla*, a title he used as a pen name in the 1940s with the release of his first book *Bushcraft: How to Live in Jungle and Bush*.

Richard's association with the Boy Scouts would lead to some interesting opportunities later in his career, particularly when it came to securing a chunk of the National Park near Waterfall in NSW as a postwar basecamp for his Bushcraft Association.

WORLD WAR TWO

World War Two began on the first of September 1939 when Britain (and therefore Australia) declared war on Nazi Germany when that country invaded neighbouring Poland. It wasn't unexpected, since international tensions had been building for a couple of years.

Once again, Richard Graves took the Oath, and putting his age down by two years, 42 year old Richard Graves signed on the dotted line, enlisting

in the 11th Anti-Tank Regiment of the Royal Australian Artillery, a militia (army reserve) unit based at Paddington in Sydney's Eastern Suburbs, just one month after the declaration of war on Germany.

Despite the declaration of war, life in Australia continued relatively unaffected by the catastrophic events in Europe and Africa such as the Occupation of France, the Battle of Britain and the Siege of Malta. The war was a world away.

Richard was still working as an advertising manager in Sydney and parading part time with his militia unit, when the first Australian troops of the Second Australian Imperial Force began to deploy overseas to the Middle East.

He applied for a commission, citing his WWI military experience and his management roles post war, and was appointed a probationary Lieutenant in the 3rd Anti-Tank Regiment.

With the start of the Pacific War in December 1941, the situation on the ground in Australian towns and cities became more anxious. The Japanese were seemingly unstoppable in their "bamboo blitzkrieg" all across the Pacific Islands and Southeast Asia, and this meant that Australia was directly under threat for the first time in her short European history. Japanese air raids had been hitting Darwin and Broome since early 1942, but it was the infamous Japanese mini-sub raid on Sydney Harbour at the end of May 1942 that really hit home that the Great Southern Land was vulnerable.

In July 1942, Richard Graves volunteered for full-time service in the regular army, the Second Australian Imperial Force, and was allotted the Regimental Number NX114001. In September 1942, Lt Graves was transferred to regimental headquarters and appointed Intelligence Officer. He remained in this role for around 10 months before transferring to a camouflage unit where he met and worked with Professor William Dakin, head of the Ministry of Home Security's Camouflage Section and author of the 1941 military training pamphlet, *The Art of Camouflage*. This meeting would prove to be invaluable to Richard's future career.

It was here that Richard set into motion his own plan for the future. For the past few months he had been working on his first book, encouraged by Paddy Pallin's success and now that of Professor Dakin's as authors. Taking a leaf out of the plan he had helped developed for Paddy Pallin, Richard now sought to become a recognised expert in the field of bushcraft and jungle survival. He had a plan in mind.

In 1942 and 1943 there had been a series of articles written up in the Army's Education Service magazine *SALT* which dealt with the topic of bushcraft and bush survival. These articles were written by experts such as legendary bushman and author Ion L Idriess as well as the head of the Army's

survival training effort, Australian Army Education Service Instructor Warrant Officer HA Lindsay.

WO Lindsay's training was restricted to the Atherton Tableland and it seemed there was no one teaching bushcraft and survival in the Northern Territory, or where it counted most, in New Guinea or the Islands. At the time, US and Australian aircrews were taking a hammering from Japanese fighters and flak and many crew who were able to parachute safely from their burning aircraft into the dense jungle were never seen again. They lacked the skills and training to survive and make their way back to safety so they perished.

As his most valuable contribution to the War Effort, Richard Graves planned a training program for aircrew in the islands, but before anyone would listen, he had to become a recognised expert in the field. To do that, he needed to publish his book.

Prior to publication of *Bushcraft; How to Live in Jungle and Bush*, Richard Graves was able to have the book endorsed by not only the Boy Scouts Association of NSW, but also by Professor Dakin, who wrote in the foreword;

FOREWORD

I should be happy to write a Foreword introducing the contents of this little textbook at any time, because of its value to those who have discovered the extreme pleasure of an interest in Nature – whether of its wild life or its superb geological monuments.

At the present time, however, war in the South-west Pacific areas has forced an almost unpopulated and very wild country on the interest of former city dwellers who are often ignorant of the methods of looking after themselves even in the Australian bush. I refer to soldiers and members of all Services, who may be faced with the jungle or bush for one reason or another, by accident or design. Field craft has thus become an essential part of the soldier's training.

"This is a war of infiltration—a war in which little packets of men, or even the individual, work, their way forward relying on their own skill." They must use their own cunning to outwit the enemy.

The man who has some knowledge of bushcraft will use the jungle and the bush to his great advantage.

I can sincerely recommend this little guide with the warning that reading must be accompanied by practice. The reader will find its exercises as fascinating and interesting as they can be useful.

W. J. DAKIN,

Professor of Zoology,
University of Sydney.

Technical Director of Camouflage,
Department of Home Security,
Canberra.

Coming from a respected scholar such as Professor Dakin, this foreword would no doubt grab the attention of army decision makers.

Leaving nothing to chance, Richard had the book published under the pseudonym *Wontolla*, his scouting name, rather than his own name. At the time he was still officially a military intelligence officer and there was an operational need to conceal his identity from critics and from the general public in case any negative publicity impacted on the Army. Richard had the book professionally edited, typeset and illustrated by the very capable staff at the FH Johnson Publishing Company, a small, but professional imprint who specialised in publishing military and natural history books in Sydney at the time.

The book was released in 1944, but a few months prior, Richard had already submitted his plans for a Junglecraft school in the Islands. Using some of Professor Dakin's high level political and military contacts, the plan had hinged on having some unnamed officer high up in US General Douglas Macathur's General Headquarters request from the Australian army the services of Lt Graves and a number of Other Ranks for the establishment of a jungle training unit for US Army Air Force and other Allied personnel in New Guinea.

On the 22nd of February 1944, and much to the surprise of the Australian Army, General Macarthur's office requested from Australian Land Headquarters the services of Lt Richard Graves and 6 soldiers to establish a jungle training unit.

By the 30th of March, Richard and his hand-picked assistants were getting off a C47 transport plane at 5 Mile Drome near Port Moresby. Designated the Australian Jungle Training Detachment, the unit was initially put to work training Australian anti-aircraft and searchlight units in the Townsville and Port Moresby areas in jungle survival and bushcraft. This valuable period helped Richard determine the best subjects to teach as well as decide on the optimum class sizes.

By July 1944 the unit was up to speed with an effective training system and syllabus in place. It was at this time that Lt Graves returned to Australia to recruit more personnel. His recruitment effort was supported by the Directorate of Military Training and it saw him travel around military establishments in NSW interviewing and testing personnel suitable to become instructors with the Australian Jungle Training Detachment.

At the end of this effort he had recruited an excellent officer offside, Captain William M. Gillespie, as well as another 32 Other Ranks, bringing the total size of the Detachment up to 40. After training the new instructors, the whole unit proceeded to the large US airbase at Nadzab in New Guinea where they would be attached to the US 5th Air Force for an initial period of three months.

The training program for US aircrew was a week long and it concentrated mainly on water, fire,



B24 bomber aircrew from the US Fifth Air Force's 380th Bomb Group learning how to construct a "shadow stick" improvised sun compass during one of Richard Graves' jungle craft courses in Nadzab, New Guinea in 1944. Note the Australian Jungle Training Detachment instructor wearing slouch hat at far right of frame.

US NARA Photo

shelter, food, jungle travel and navigation. For the bulk of the American trainees, the program was their first introduction to living in the jungle away from their cold PX Coca Cola, comfy cots and mosquito nets. Some of the students took to the training like a duck to water, while others just barely suffered through.

Trainees were put into groups of fifteen (roughly the crew size of a US heavy bomber) and were given mainly practical training with very little theory involved.

Thinking ahead, Richard Graves began to re-jig his training syllabus for post-war civilian use and photographed a lot of the techniques. Both the training notes and the photographs would appear in his ten *Bushcraft Handbooks* and the later compilation volume, *The 10 Bushcraft Books*.

The training program proved to be extremely popular, with USAAF units lining up to put their aircraft crews through the week-long courses. The unit expanded to 50 ORs and 2 officers and personnel started to filter out to other large US airbases such as those at Hollandia, Morotai and Biak.

It was around this time that members of the unit, including Richard Graves himself, began to take part in search and rescue operations in enemy territory. Records are scarce, but members of the Detachment are known to have participated in several land patrols to extract downed aircrew

and were present as "jungle advisors" on USAAF Catalina search and rescue aircraft.

Keeping his promise "I shall return!" Richard Graves' benefactor, Supreme Commander of Allied Forces in the South West Pacific Area General Douglas MacArthur strode ashore from a US Navy landing craft in a carefully stage-managed fashion, onto the beachhead at Leyte Island in the Philippines on the 20th of October 1944, the same day it was secured following the US invasion. Unbeknown to MacArthur, let alone to Australian Land Headquarters in Brisbane, members of Richard Graves' Australian Jungle Training Detachment had been inserted into the same area by boat and PBV amphibious aircraft to rescue downed US airmen behind Japanese lines in the weeks before. They would be the only Australian army troops to participate in the Philippines invasion.

By December 1944, Richard Graves was pulled out of the field suffering from a severe arthritic condition, Spondylitis. He continued to administer the Detachment from New Guinea Force HQ in Port Moresby, but the day to day running of the unit was handed over to Captain Gillespie, an extremely capable officer, instructor, bushcraft and search and rescue expert in his own right.

Wound down in June of 1945, the unit was not finally disbanded until the end of August that year, a few days after the Japanese surrender.

At a final disbandment ceremony and

dinner in Brisbane, Richard Graves handed each of the 50 members of his Australian Jungle Training Detachment a copy of a United States Army Air Force commendation which read in part:

The Commanding General takes great satisfaction in expressing his appreciation of the training given to American pilots and crews by personnel of the Australian Jungle Training Detachment.

By war's end, the Australian Jungle Training Detachment had trained hundreds of US and Australian personnel in jungle survival techniques and had participated in dozens of search and rescue operations behind enemy lines without the loss of a single man.

These experiences would stand Richard Graves in good stead after he returned to civilian life.

THE 10 BUSHCRAFT BOOKS

Richard returned to his work in advertising upon his return to Australia, and this was a role he would continue to work as his "day job" for the rest of his working life. In his free time he concentrated on developing his wartime bushcraft syllabus and on preparing a series of bushcraft handbooks for publication as text books of sorts for the newly-established Bushcraft Association. He also managed to find the time to write two young adult fiction novels *Spear and Stockwhip* and its sequel *Tibinbilla Adventure*.

His original bushcraft book, published under his pen name *Wontolla* had gone out of print after just one edition so he was keen to publish a series of so-called *Jungle Gadgets* which were a shortened version of his later *Bushcraft Handbooks*. The *Jungle Gadgets* were sold by a major Sydney department store and were marketed primarily at children. The fact that the *Gadgets* contained highly-effective animal trap designs led to an unexpected backlash against Graves, something he would have to find himself getting used to in years to come



Richard Graves' best-known work, *The 10 Bushcraft books*, a compilation of all ten of his 1950s *Bushcraft Handbooks* under the one cover.

during his exhausting war of words with various committee members of the Sydney Bushwalkers.

In 1952 the first edition of Graves' ten *Bushcraft Handbooks* were published by Dymocks in Sydney, who had also previously published his two novels. The ten *Bushcraft Handbooks* were; *Bush Ropemaking*, *Bush Hutmaking*, *Snares and Traps*, *Impoverished Campcraft*, *Time and Direction*, *Travel and Gear*, *Food and Water in the Bush*, *Firemaking*, *Tracks and Lures* and *Knots and Lashings*.

As per the Bushcraft Association's field and self-paced training philosophy, the ten *Bushcraft Handbooks* were designed to be slipped into a trouser pocket or rucksack and taken out bush so the student could concentrate on and learn one general bushcraft topic area at a time. They were published in several editions and were finally published under the one cover as *The 10 Bushcraft Books*.

THE BUSHCRAFT ASSOCIATION

By 1947, just two years after the end of the Second World War, Richard Graves had run with his passion and established the Bushcraft Association, a training organisation for the purposes of instructing young folks and others in the arts of bushcraft. Boy Scouts troops, Senior Scouts (Venturers) units, Guides, Rovers crews, Rangers, Army, Navy and Air Force Cadet units all benefited from the free training courses conducted by Richard Graves and his group of civilian instructors.

Richard Graves' contacts in the NSW Boy Scout Association assisted him in negotiations with the Board of Trustees of the National Park Trust which saw the Bushcraft Association acquire free use of a parcel of the National Park (from 1954 known as the Royal National Park) near Waterfall. The site was close to fresh water, and permission was given by the National Park Trust for the Association to harvest limited amounts of green timber as well as use as much dead material as they liked. The site had bulk amounts of dead cabbage tree fronds and tussock grass nearby, which was immediately put to good use by members and students of the Bushcraft Association in making ropes and cords and thatching for the Association's rough huts and shelters on site.

At the urging of Richard Graves' mate Paddy, the Bushcraft Association successfully applied for membership of the NSW Federation of Bushwalking Clubs.

The Federation's description of the Bushcraft Association was as follows;

The Bushcraft Association was developed for those who are interested in a practical knowledge

of bush materials and the use of bush lore - for food, shelter and self-preservation. Camps run as training for leadership. Mixed adult membership.

Membership of the Federation put the Bushcraft Association onto an equal footing with old, established organisations such as Myles Dunphy's Mountain Trails Club and The Sydney Bushwalkers, of whom Paddy Pallin was a founding member in 1926. The Sydney Bushwalkers in particular as an organisation had a strong and proactive conservation focus and they had been trying for decades to secure their own slice of the National Park from the Board of Trustees.

Various committee members of the Sydney Bushwalkers saw the Bushcraft Association as a destructive organisation which ran contrary to the stated aims of the NSW Federation of Bushwalking Clubs. It's possible there may have been some sour grapes over the Bushcraft Association's acquisition and use of the camp near Waterfall as well.

Various senior members of the Sydney Bushwalkers set out to have the Bushcraft Association ejected from the Federation by painting them as environmental vandals and as an attempt to destroy the Bushcraft Association's credibility as a training organisation among the general public, these same noisy folk very publicly poo-poo'd the very idea of this type of bushcraft training and skills, insisting that the training provided by the Bushcraft Association had zero value for "modern bushwalkers".

Richard Graves, taking the high road, did his best to simply ignore the knockers, but there was constant whingeing from these people without let-up. A look at the Sydney Bushwalker's newsletters from the period shows the pathological hatred of the Bushcraft Association displayed by one senior Sydney Bushwalkers committee member in particular. It became so boring for the other members of the Sydney Bushwalkers that they began to walk out of general meetings whenever the "evils" of the Bushcraft Association were brought up.

Specifically, the grievances were that the Bushcraft Association had been spotted using green vegetation at their base camp. Additionally, two young members of the Bushcraft Association had been apprehended in a nature reserve elsewhere in Sydney shooting rabbits on a Sunday, apparently in violation of some arcane NSW law prohibiting the use of firearms on the Sabbath. In addition, and with the blessing of the National Park Trust, the Bushcraft Association undertook trapping programs around their bush camp near Waterfall for the purposes of eradicating rabbits, foxes, rats and wild cats. There's an epic whinge in one of the old Sydney Bushwalkers newsletters

Fed up with the constant attacks upon himself personally and upon the Bushcraft Association as a whole by various committee members of the Sydney Bushwalkers and others who saw members of the Bushcraft Association as little more than environmental vandals, Richard Graves finally published a gentle rebuke in the Annual journal of the NSW Federation of Bushwalking Clubs, the "Bushwalker".

SO YOU'RE A BUSHWALKER?

By Richard H. Graves, Bushwalker Annual, 1947

Now, being a bushwalker, no doubt that you talk of the tough ways and rough ways where real walkers walk... and you talk "conservation", which is quite a good aim, but by "conservation" what do you mean by that name? Do you mean conserve nettles which sting your bare knees? Do you mean conserve the honey that's stored by wild bees? Do you mean conserve eels which kill fish in the creek, or preserve all bunnies so fat and so sleek? Would you save the sharp sedge that cuts through your skin, is the use of forked sticks found on the ground a bush sin? So as a bushwalker, I've no doubt you talk of the vandals like me who take things as they walk.

The crayfish or yabbie that lives in the creeks, do you know how it burrows and causes dam leaks? No doubt you'd preserve it, be damned to the dams; and also the vines whose roots grow into yams... or perhaps you don't know a yam-bearing vine, or that most useful bush plant called "settler's twine". Its botanical name is impressively long... *Gymnostachys anceps*... (roll that off your tongue.) Or perhaps you don't know of the bark like green leather. It's a most useful thong when you're out in bad weather... it's *Aster ellipticus*... but what's in a name... do you know where to look and find some of the same? And what of those saps, so milky and white... get one drop in your eyes and you've lost your sight... do you know that evil potential Death Shrub... *Dubosia*? You'll find it in forest and scrub.

Take the nettles; no doubt they annoy you a lot, but boil them for ten minutes and you'll gobble 'em hot. The honey the wild bees have stored in the tree has a bush fragrant flavour that's pleasant to me. The slippery eel, when fried in a pan, has a sweetness and richness for the palate of man. The cute little bunny is good in a stew, or "braise-en-clay" is a fine meal for two. Some of the sedges are stronger than twine, they grow all through the bushland and they're yours, Nature's and mine. The forked stick blown down from a tree in a storm makes a fine swinging firestick as you see by its form. The yabbie when boiled in water with salt, with yams makes a meal in which there's no fault. Settler's Twine has a strength so incredibly great, one long, grass-thin leaf takes 200lbs weight. *Aster ellipticus*, the leather bark tree, grows real greenhide laces... their cost is quite free. And beware of all saps which flow milky and white, though one sort is safe, most such saps have a bite, and *Dubrosia*, that shrub with the venom of snake, know it, avoid it for very life's sake.

It's vandals like me see these things as we walk. We make use of the bush and don't just gabble and talk. For example three sticks that lie dead on the ground, make a trap for bunny, who dies without sound... dry fibres of bark laid in strands make a rope. You can trust your life to it... and don't have to hope. The dead hooks of a branch will soon make a pack that will ride like a "Paddymade", high on your back, and sedge or dead palm will make a good thatch, while lantana will stand you in lieu of a match. Some thorns make you fishhooks to catch you your eel... things like these in the bush will fill you with zeal... you want to learn more, that is easy to see... We're willing to teach you-the cost is quite free.

At a quiet place hidden in the National Park, there's a gang who will teach you of bush, branch and bark... they'll teach you direction and time by the sun and a thousand things more, for their work's just begun. "Seek and ye'll find" is a phrase old and true, and to seek out and find them is right up to you. Now as a bush lover perhaps you may see how the craft of the bush makes "vandals" of these.



Association Instructor Blake Ormsby from Sydney instructs a Girl Guides leader in making a fire platform on wet ground during a Bushcraft Association training weekend at the Association's camp near Waterfall in 1952

where the writer latches onto the term "wild cat" and tries desperately to spin it to mean the native quoll rather than the feral domestic cats the Bushcraft Association folks were clearly referring to.

As an olive branch, Richard eventually made an offer to the Sydney Bushwalkers to send a pair of impartial observers to check out the training and other activities at the camp themselves. This offer was gladly taken up.

At the next meeting of the Sydney Bushwalkers, the observers reported that they had seen no "environmental vandalism" and that the Bushcraft Association training they had undertaken, particularly that covering water, shelter, travel and navigation had great value for bushwalkers in the Greater Sydney area. The report was summarily dismissed by the committee who declared their previous position on the Bushcraft Association to be unchanged.

Eventually, the Bushcraft Association resolved to stop wasting their time and voluntarily resigned from the Federation of NSW Bushwalking Clubs. The focus remained on leader training for youth organisations and indeed for bushwalking clubs.

The Bushcraft Association continued until the mid-1960s despite the loss of their training camp near Waterfall following the transferal of the Royal National Park to the newly-formed NSW National Parks and Wildlife Service. With Richard Graves' health declining, no base, and with no one left to carry the torch, the Association finally closed down and was all but forgotten, except by those who remembered fondly the excellent training, adventures and the fellowship offered to students and members by Richard Graves' Bushcraft Association.

LATER LIFE

Now a well-recognised author and father of four surviving children, Richard Graves still found time to go bush as often as his health allowed.

In the early 1960s he wrote two bestselling books on marketing and sales of his two novels and his bushcraft books continued to chug along.

Richard Graves remained greatly affected by his experiences in the trenches of Gallipoli and France during the Great War - just one of tens of thousands of ageing Australian WWI Diggers with undiagnosed post-traumatic stress disorder who would be haunted by their experiences in the mud and blood of the trenches until their dying day.

Richard Graves passed away from illness on the 3rd of February 1971 with his beloved wife of 43 years, Jessie at his side. He was 73 years old.

RICHARD GRAVES' LEGACY

In the late 1970s, years after his passing, new editions of Richard Graves' bushcraft books were published, omitting the trapping chapter, so as to appeal to a wider, more environmentally-aware audience and the books remained classics of the genre, even finding success in the United States.

The 2010s saw a resurgence in the popularity of Richard Graves' bushcraft books as the "new" craze of Internet-fueled bushcraft began to gain traction worldwide.

VARIOUS BITS AND PIECES

THE DILLY BAG

THE AUSTRALIAN BUSHCRAFT LOGO AND PATCHES

CRAIG BROWN



A while ago I designed and released into the wild an Australian Bushcraft logo. It isn't a logo for the magazine, but rather a logo for the Australian bushcraft community as a whole.

I open-sourced the design so that anyone could use it and even potentially make money off it if they like without having to worry about paying royalties, or legal problems or whatever. The way I see it, the more visibility the logo gets, the more exposure our own style of Australian bushcraft gets, and that is

a good thing.

I've seen the logo on people's Facebook profile pics, on patches, caps, t-shirts and on bumper stickers. I personally have one of the patches sewn to my old canvas rucksack. Aside from the original colour scheme we'll discuss shortly, I've seen patches in camouflage colours like Multicam and Auscam as well as army green and desert tan. The design has really caught folks' imagination and has taken off which is great to see.

The original colour scheme of the logo is simply a brown kangaroo and the lettering "Australian Bushcraft" on a black background. Here's the meaning behind it all:

- The kangaroo is an instantly-recognisable symbol of Australia and our unique wildlife. The 'roo used on the logo is the same silhouette you'll see on our road signs, on the RAAF roundel and on army tac signs.
- The brown colouration of the 'roo and the text represents the harsh nature of much of the Australian continent.
- The black background celebrates and acknowledges the 2000 plus generations of Indigenous Australian mastery of Australian bushcraft.

As the designer, I may be a bit biased, but I reckon it's simple, iconic and easy to recognise - three factors which make up a good logo. Even in camo colours it works well and since most Aussie bushcraft enthusiasts usually have one or more pieces of "tactical" clothing or equipment with velcro patches on them, these Australian Bushcraft patches can fit just about



The original Australian Bushcraft logo in all its glory.

anywhere from rucksacks, baseball caps, shirt shoulders, belt pouches, to notebook covers.

As mentioned before, I have open-sourced the design, so anyone can use it.

Some suggestions for items to have made up include:

- Leather, PVC or embroidered patches
- T-shirts
- Baseball caps
- Stickers
- Etchings for knife ricassos
- And more!

Email us for the artwork at contact@ausbushcraftmag.com.au.



A selection of Australian Bushcraft velcro patches inexplicably adorning a vintage flax water bag for the photo. Soon you'll be able to purchase these, as well as other Australian Bushcraft-branded items directly from our online shop at www.ausbushcraftmag.com.au

The background of the entire image is a close-up, slightly blurred view of the Australian flag. The blue field with white stars is visible in the lower half, while the red and white stripes and the white kangaroo and emu are visible in the upper half. The text is overlaid on this background.

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